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THE BOTTOM OF THE WORLD

A Complete Book-Length Novel
By JOHN C. BURROUGHS and HULBERT BURROUGHS

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By A. ROWLEY HILLIARD

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STARTLING STORIES

Vol. 6, No. 2 CONTENTS September, 1941

A Complete Book-Length Scientifiction Novel

THE BOTTOM OF THE WORLD

By JOHN COLEMAN BURROUGHS and HULBERT BURROUGHS

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Cover Painting by Rudolph Belarski—Illustrating THE BOTTOM OF THE WORLD

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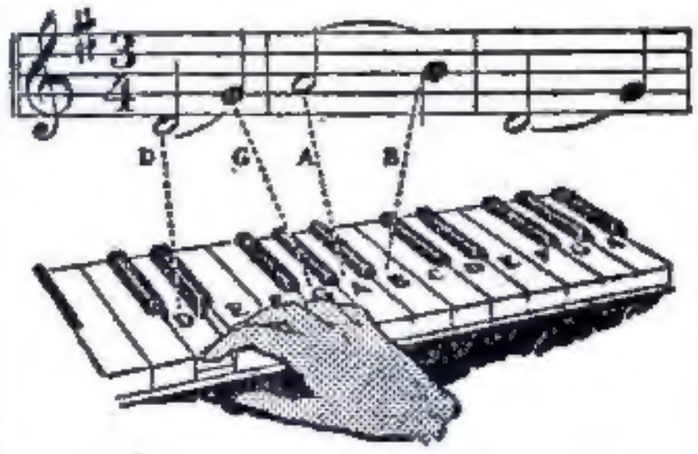

Strike the notes above and you'll be playing the melody of this famous waltz. Easy? Read what Mrs. "P. L. D., of California, says: "I am taking your cue for mother and child to learn together. I can hardly believe I can play the Merry Widow Waltz in two weeks."

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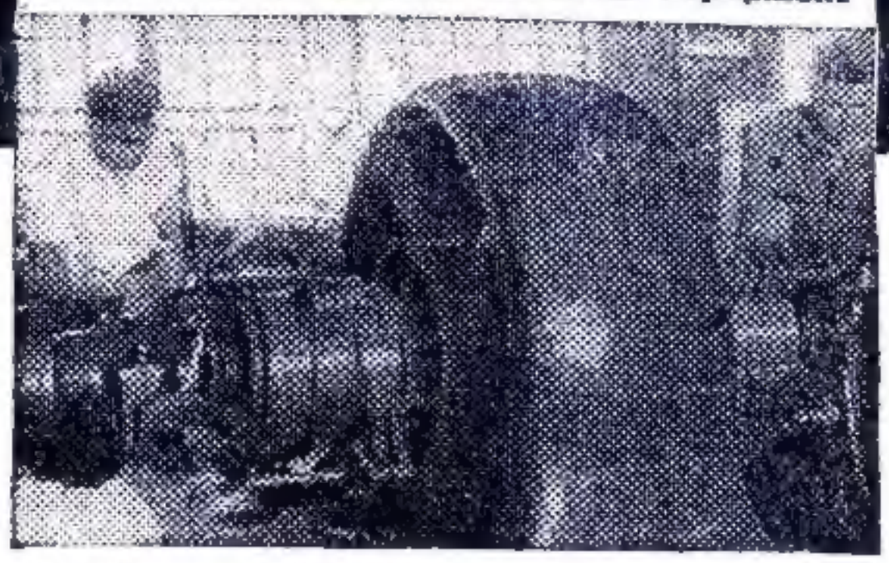

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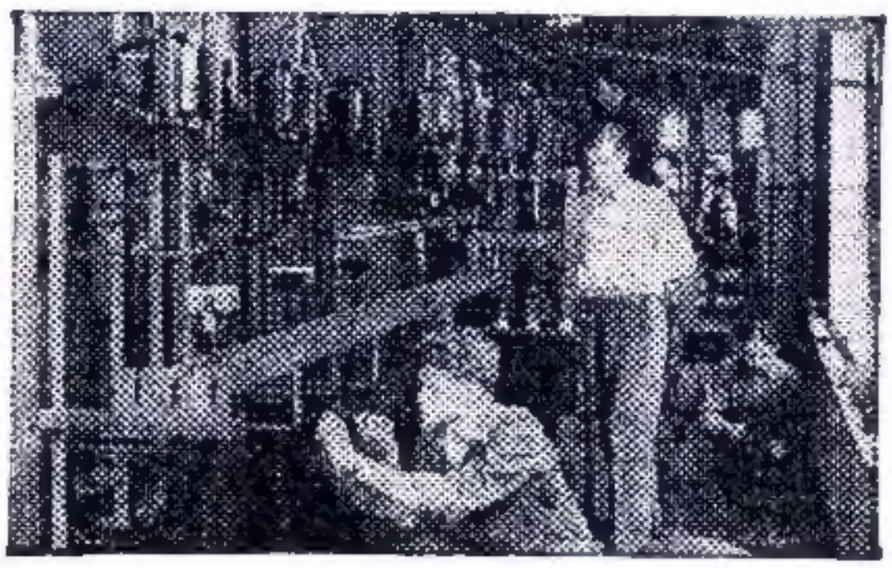

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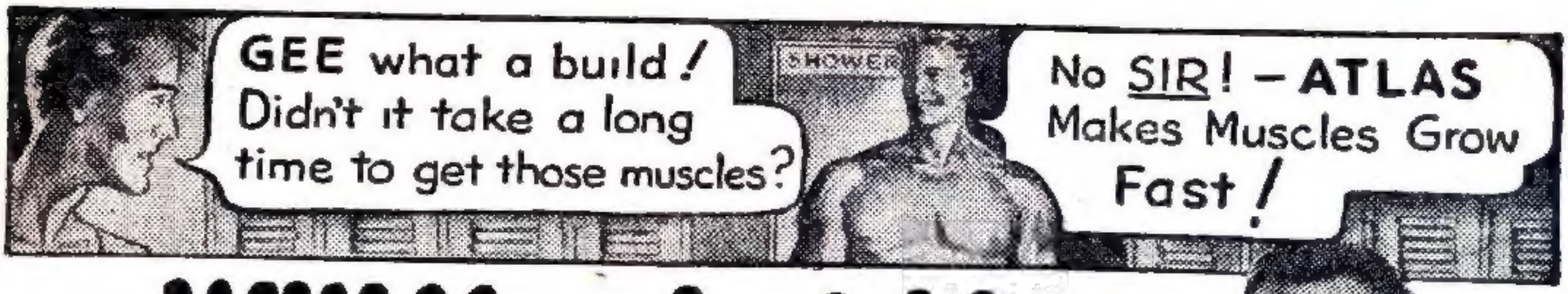

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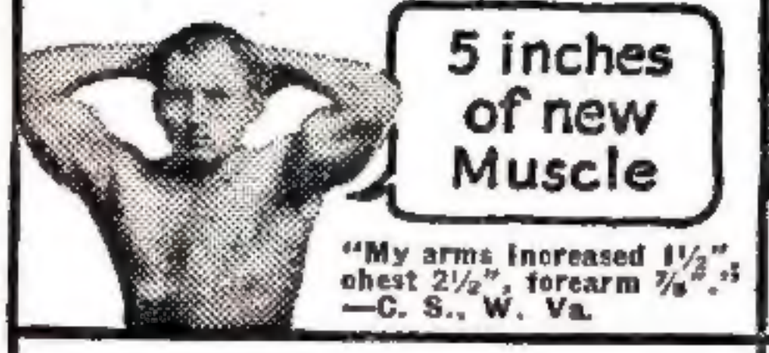
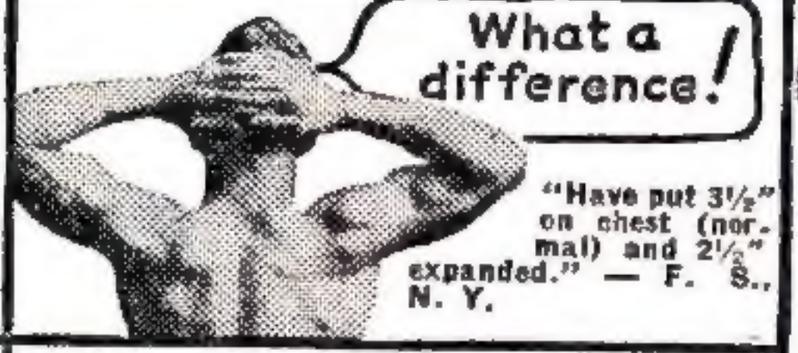
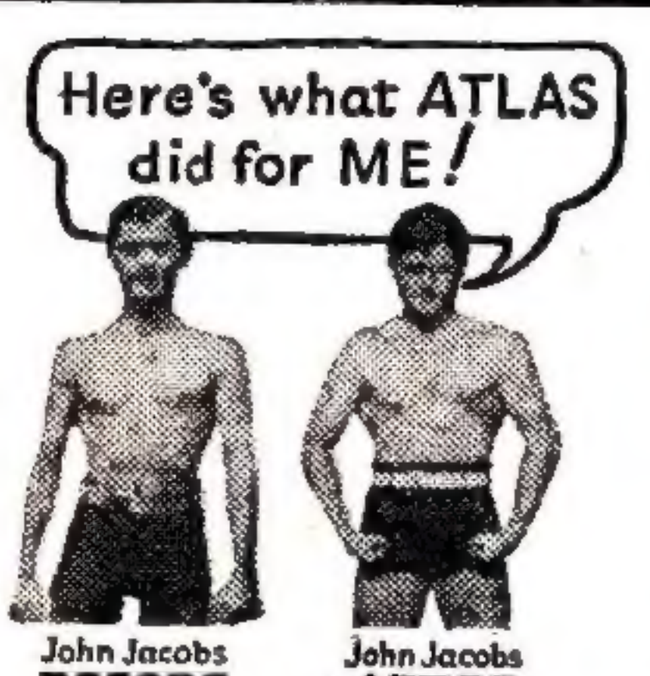
LET ME START SHOWING RESULTS FOR YOU



"My arms increased 1½", chest 2½", forearm ⅞".; —C. S., W. Va.



"Have put 3½" on chest (normal) and 2½" expanded." — F. S., N. Y.



"Am sending snapshot showing wonderful progress." —W. G., N. J.

"When I started, I weighed only 141. Now weigh 170." T.K., N.Y.

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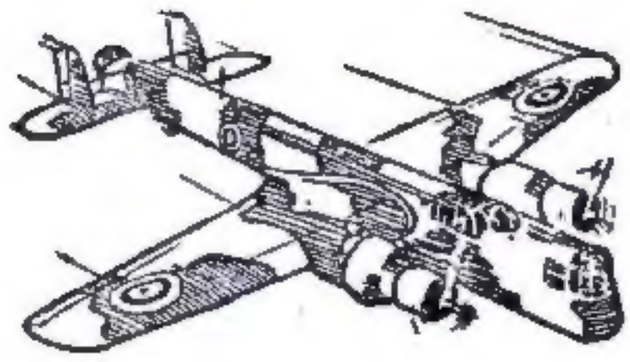

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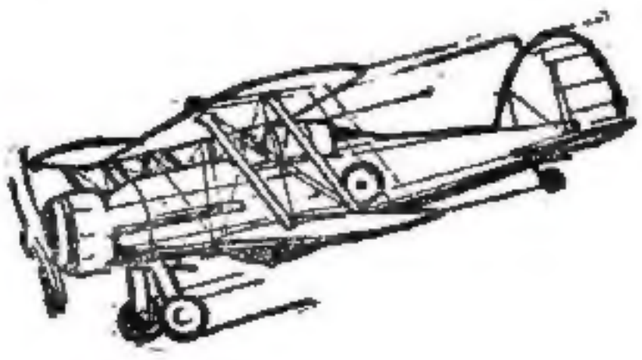

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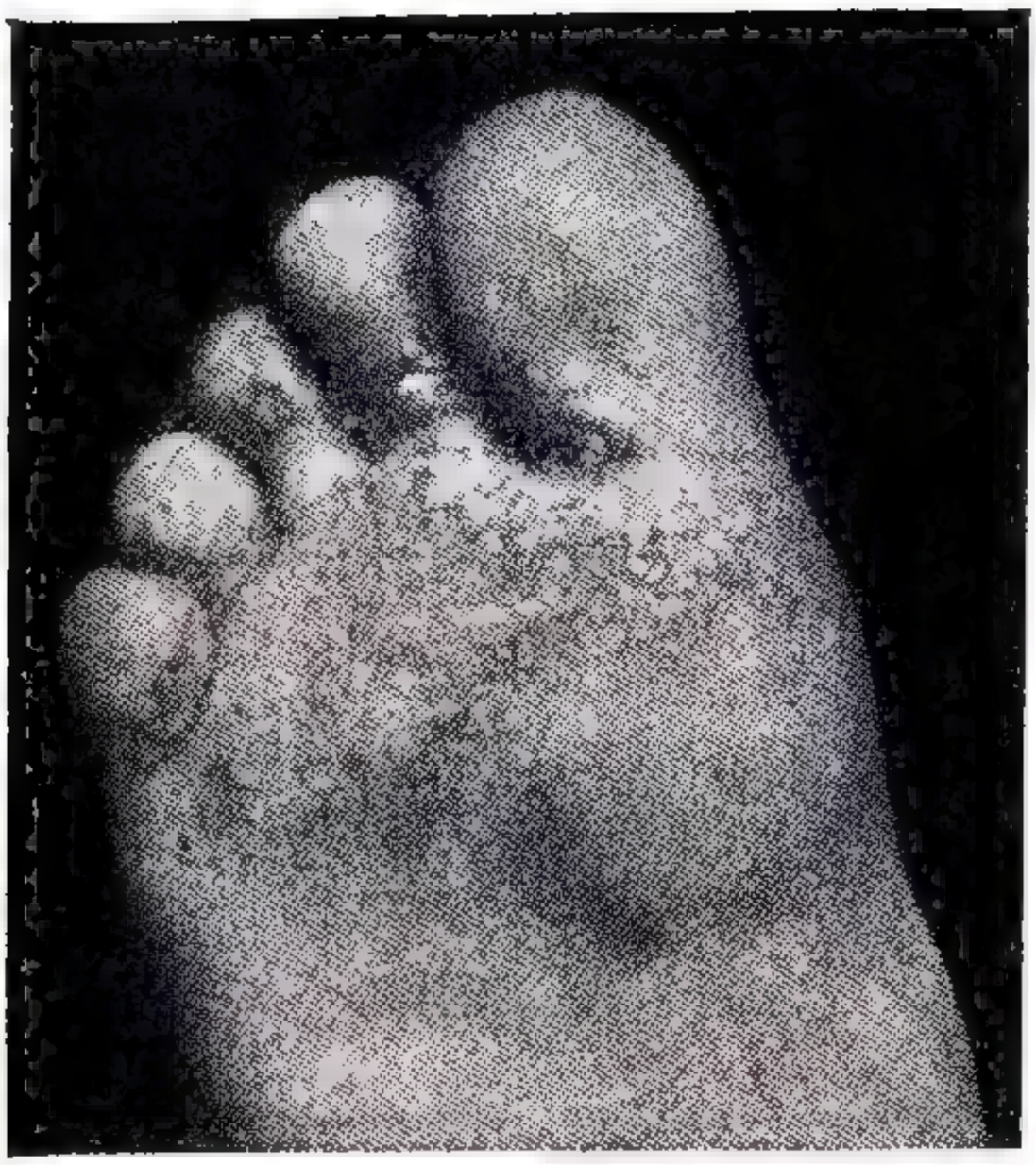

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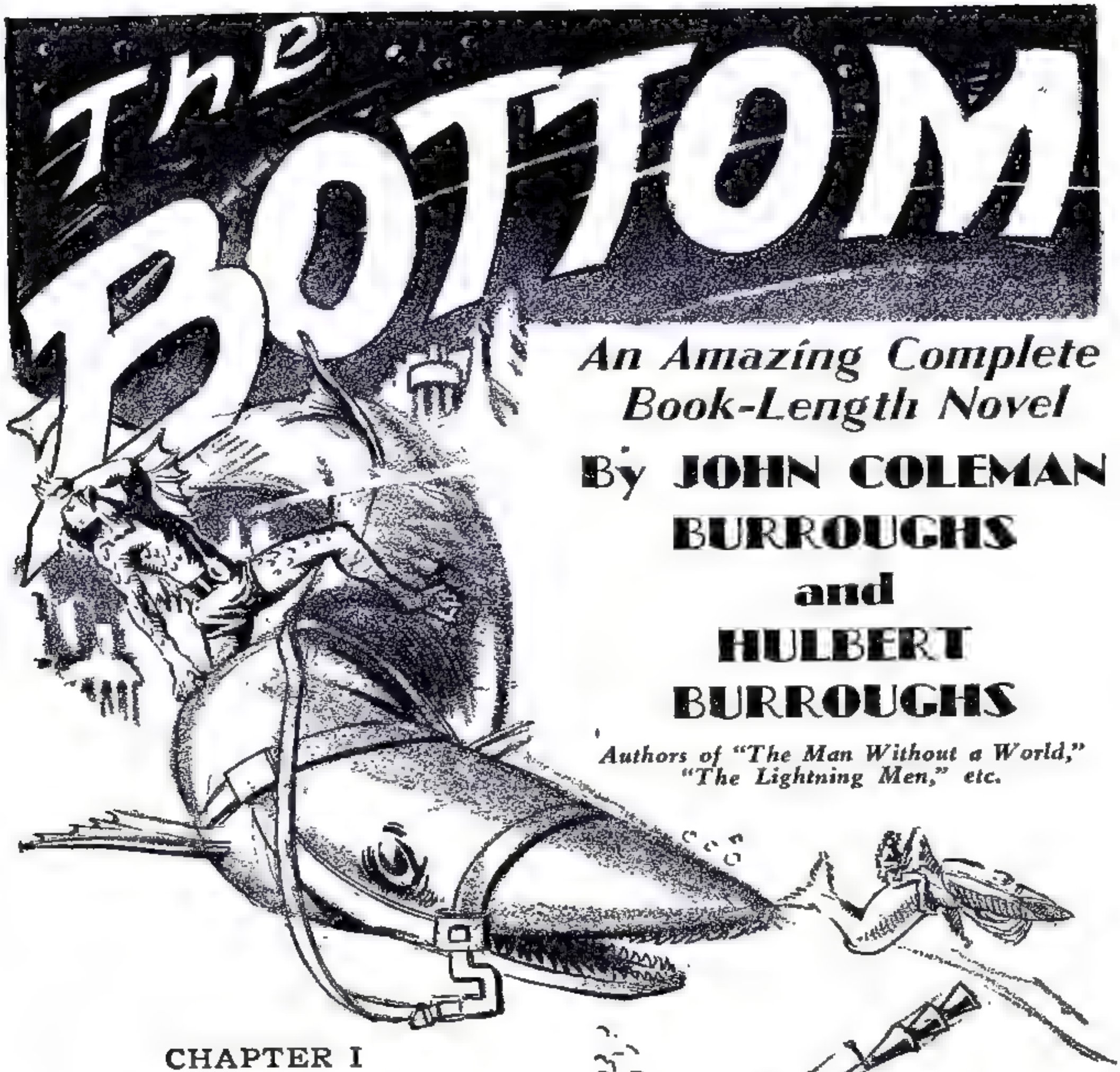

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CHAPTER I

Pleasure Before Death

"OF course," said Fritz Megler in that slow, measured way with which so many old people speak, "I was using Miss Lawrence as an example to illustrate my belief that time is only relative. I do not actually say that in four years she will be as old as I. But it would be possible for her to appear an old woman inside of that period, provided her metabolism could be induced to speed up twenty times."

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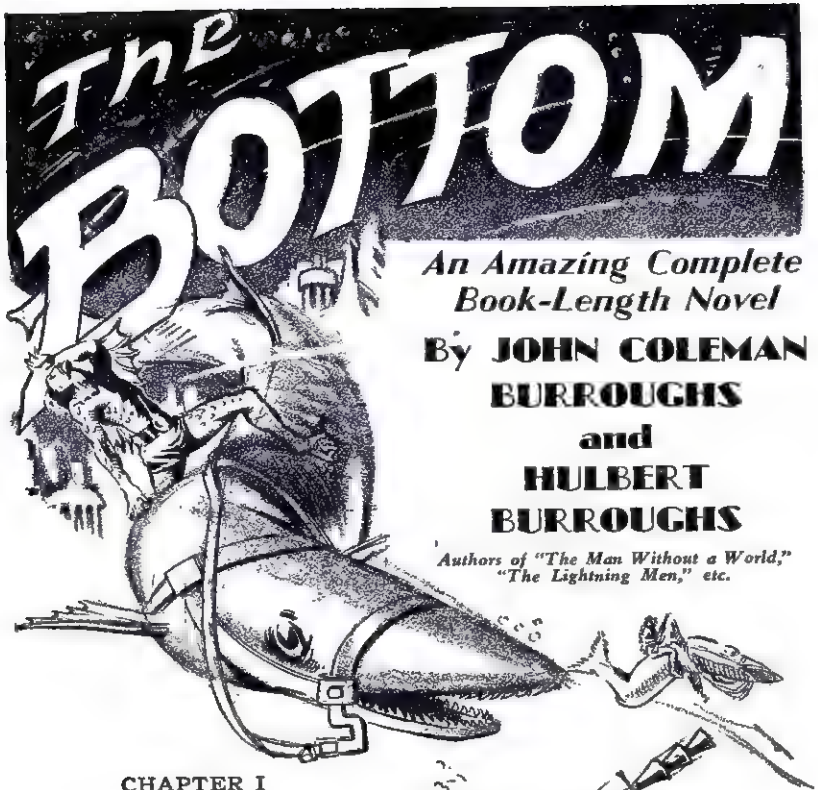

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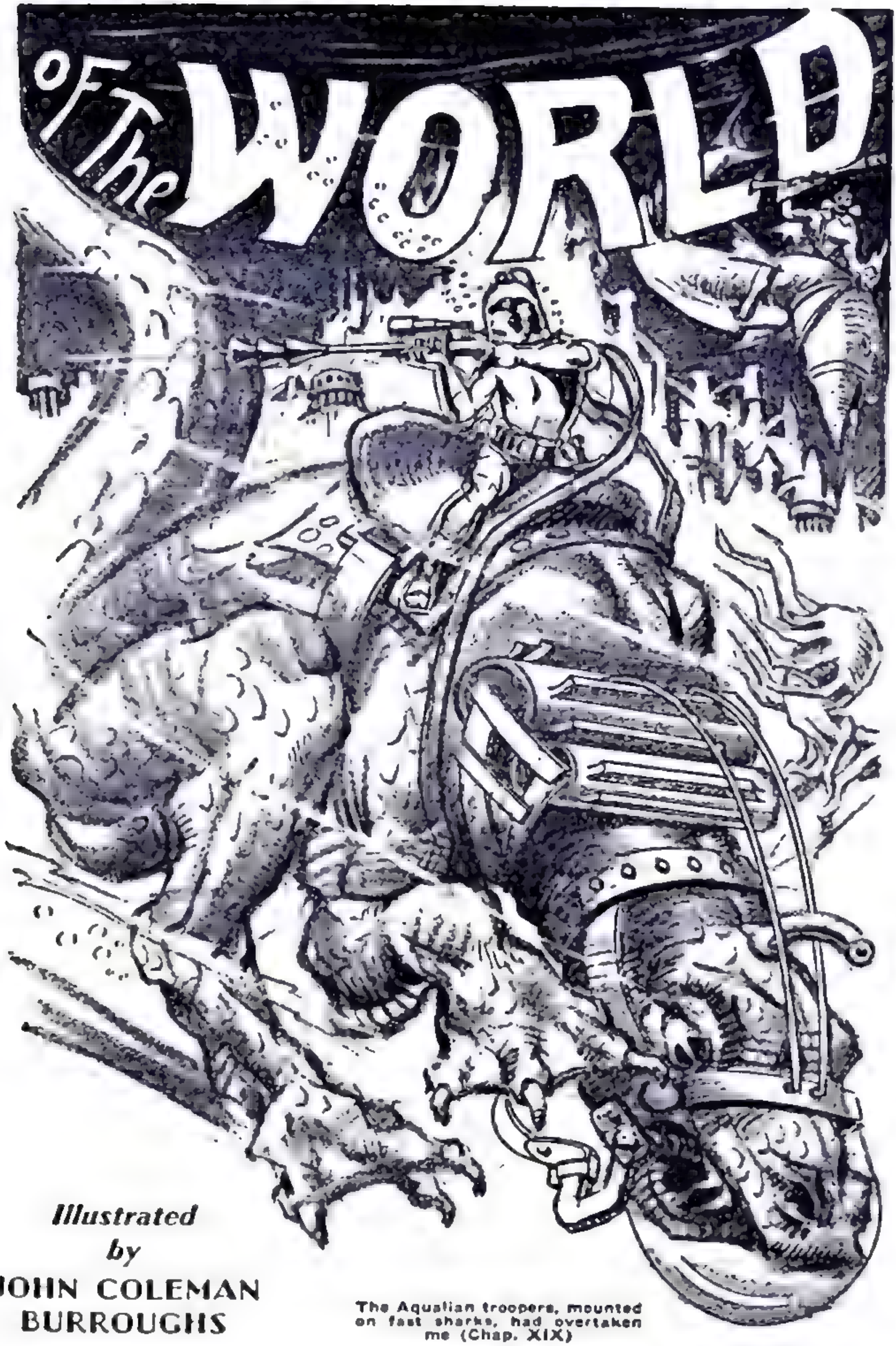
The Aqualian troopers, mounted on fast sharks, had overtaken me (Chap. XIX)

The WORLD



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back her pretty head and laughed gaily.

"Shame on you, Mr. Megler!" she mocked. "Your prophecy is already frightening me into senility!"

"I prefer to think my daughter will be just as young and lovely in four years as she is tonight," Mrs. Lawrence said, passing more delicious fried chicken that made me thankful for such cooking as hers.

"On the other hand," continued Fritz Megler, his eyes shining with a strange light I had never seen in them, "if her metabolic rate decreased twenty times and the body temperature lowered accordingly, then it would require literally ages before she would grow old. In fact, there may be a means of inducing growth in reverse—to become young again!"

It was unusual for Fritz Megler to talk a lot. In the twenty-five years that he had been my father's partner, he had never spoken as much as he had tonight. We were gathered at Mrs. Lawrence's home for the purpose of celebrating his 75th birthday and undoubtedly he was trying to be entertaining. Furthermore, Dad had not yet arrived. Megler always seemed more at ease when he was not around.

To me, Fritz Megler had always been an old man. I remember as a boy how I would watch him working in Dad's laboratory down on Market Street. I can see his bent, stiff-necked figure crouched eagerly over a cluttered table. On cold, foggy days and at nights he would wear a black cape to keep the damp air from gnawing at his old, rheumatic bones. I pictured him as a medieval alchemist, searching for the secret of immortality or a universal solvent.

HE was an indispensable part of the firm of Norris and Megler. Years ago Dad and he had established a small research laboratory. Numerous inventions and practical improvements over earlier patents built them a splendid reputation. Since then, the Norris-Megler Institute had become a mecca for scientists and manufacturers from all over the world who had theoretical and practical problems to be solved.

My father, Theodore A. Norris, was without question the theorizing genius of the firm. He produced the ideas, the elaborate, detailed plans and drawings. But it was Fritz Megler who made the ideas work. Dad was friendly and social by nature, Fritz Megler retiring and quiet. Dad was always smiling, while Megler seldom was. It was only natural that Dad should become the better known of the pair, for Megler seldom spoke more than necessity demanded.

That was why I was surprised at his loquacity as we sat in Mrs. Lawrence's living room, having a buffet supper and trying to balance our plates on our knees.

"Have a hot roll, Danny," Mrs. Lawrence said, coming around in front of me.

"I've already had six," I objected, reaching for another.

I've never tasted such food. While Mrs. Lawrence had resources enough to have bought out the entire cuisine of several large hotels, she preferred to do most of her own cooking. She was that type. She lived simply and modestly with her daughter, in the old estate that had passed to her when her husband died. The place was an old landmark in Oakland and its beautiful grounds made it the showplace in a section that was filled with gorgeous homes.

Dad and Mrs. Lawrence had been friends for years. Perhaps that was the only reason why Mrs. Lawrence always remembered Fritz Megler's birthday. Not that Fritz Megler shouldn't have a birthday party, but he just wasn't the sort one ordinarily gives parties for.

"Where is your father, Dan?" Admiral Tyler asked, his deep voice re-

verberating in the great room. He surveyed me from beneath his white, bristling brows. "Ever since he and I went to school together at Page Academy and he showed up tardy at all drill formations, he has been late to everything. Why, I swear he is going to keep his own funeral waiting!"

"Admiral Tyler, you leave Danny's father alone." Barbara Lawrence

DAN NORRIS

frowned in mock anger and tucked her arm beneath mine as we rose from the sofa where we had been sitting. "If we can't have the man himself with us, we at least have his son."

"Meaning that you don't consider me a man?" I asked.

Everyone but Megler joined in the laughter as we strolled into the dining room.

It was a giant birthday cake, beautifully decorated, but Fritz Megler apparently took no particular notice of it as we gathered around the table to watch him cut it.

"Old age is a disgusting condition," he said as he thrust down the cake knife until the hilt was partly buried in the chocolate frosting.

"Oh, you forgot to make a wish and blow out the candles, Fritz!" cried Mrs. Lawrence.

"I'll make a wish," he answered, "in just a minute."

Megler grasped the knife firmly in his hand, poised over the cake. His thin figure seemed more bent than usual. The hollow, sunken eye-sockets and deep furrows in his sallow face seemed to accentuate the bony prominences of his skull. They made him look far older than his 75 years. He was gazing at Barbara as

his voice rasped out.

"Old age is a disgusting condition," he repeated and there was no doubt that he was serious. "The custom of annually celebrating advancing age should be, as Mrs. Lawrence so kindly intended it, a joyous occasion. Unfortunately it cannot be. Advancing years should bring increased activity. Why else should we live and work, our brains gaining in experience and precious wisdom, only to have our failing bodies die just when we should be better prepared than ever before to accomplish worthwhile things?

"The mind of man was never intended to die. Until we can find a means of stopping the dread, insidious approach of senility, until we can preserve forever the usefulness and beauty of youth, old age will forever remain what it is—pitiful and disgusting. Yes, I'll make a wish. I wish for eternal youth!"

He took a sudden, quick breath and blew. Although the cake was crowded with them, every candle went out.

After dinner we gathered in the gardens to play a favorite game of Mrs. Lawrence's. It was a beautiful night, cool and clear. The full Moon shone down through the huge old trees and transformed the flat, spacious lawn into a checkerboard of dancing shadows and sparkling silver. Again I found myself beside Barbara Lawrence as her mother stood before the group of us and called for attention.

"Almost time for the game," she announced, looking at her wristwatch. "The pigeons ought to be flying in any minute. Tony, my chauffeur, has gone to the other side of town with one for each of us. He released them exactly an hour ago, I hope. Each bird carries a message in a capsule attached to its leg. When they arrive home—they always come to the fountain first for food—each of us will take one of the messages and follow the instructions. Please do what it says, or it'll spoil the fun."

We all promised. She was like a young girl in the joyous anticipation of her game.

"There's the first one, Mommy!" cried Barbara.

Her sharp eyes had picked it up as it circled in the dark sky above a tall elm. Admiral Tyler was the first to catch it. He removed the little piece of rolled paper in the capsule on the bird's leg. While he was adjusting his glasses to read the instructions, Mrs. Lawrence took the bird and fondly stroked its head.

"Read it out loud," begged Barbara. "Remember, Admiral, no faking."

Tyler cleared his throat and his tremendous voice boomed forth.

In case they think that you're too old,
You must prove that you are bold—
And so prepare to kiss the *two*
Who stand the closest next to you!

Amid roars of laughter, Admiral Tyler lifted his bushy white mustache. He planted a kiss first upon the cheek of Mrs. Lawrence, then upon a stout, elderly widow beside him, who blushed in the moonlight and tittered girlishly.

"I have the next one!" The bird had flown down and come to rest almost in my hands.

"Let's hear it, Danny," someone ordered.

I read aloud:

This little note is flown to you
By a tiny bird on the wings of night.
And see! It says that you must dance
With the girl on your right.

BARBARA LAWRENCE was the girl upon my right. We stayed and watched the game until all the birds but one had come home. Then Barbara and I started toward the ballroom for our dance.

"Now I wonder where that other bird is," we heard Barbara's mother muse as we passed by her.

She seemed anxious, for a cold wind had come up quite suddenly and strangely.

"Mommy always worries over her birds, if they're the slightest bit late." Barbara laughed. "Sometimes I think she worries more over them than her daughter."

"She's given up worrying about you," I remarked. "For the past four years you haven't been home longer than a week at a time. I haven't seen you more than a few times since we

BARBARA LAWRENCE

were kids and played in the trees around here and you kept tree-house for me."

Barbara laughed. "I'll be through school in a little while now. Then I'll come home to stay. Probably I'll pester you and your dad to death to give me a job."

We entered the ballroom. I was holding Barbara close as we danced to the melodious rhythm of a little Hawaiiian orchestra playing at one end of the room.

"There's your dad now, Danny," Barbara said.

We both waved to him. He was standing in the doorway, greeting Mrs. Lawrence and surrounded as usual by a group of his friends. Dad was a small, thin man with sparse, snow-white hair and dimpled cheeks. Except for his dynamic energy and clear, sharp eyes, he reminded one more of a preacher than a scientist.

"I wonder what kept him so late at the office," I mused.

It was about 8:45 in the evening. There were five couples dancing on the floor. Barbara and I circled in front of the orchestra. The others were near the far end of the floor. Mrs. Lawrence was speaking to the orchestra leader, asking him to play some request number for one of the guests. At the other end of the room Dad and Fritz Megler were talking with Admiral Tyler.

Outwardly the scene was one of peace and contentment, yet I felt a strange exhilaration, a sense that the very air was charged. I thought at first it was the subconscious effect of the wild rushing of wind in the trees and about the corners of the building. Even above the music, the howling of the sudden storm rose in weird, exciting harmonies. At the peak of a particularly wild flurry the lights dimmed and went out. Almost immediately the ballroom floor trembled beneath our feet.

Barbara clutched my arm.

"Danny, what is it?"

Before I could answer her, the building lurched with a violently downward motion. The hardwood flooring cracked and splintered. Boards ripped up as a ten-foot crevasse suddenly appeared across the floor. We staggered to keep our foot-

ing. A wild confusion of sounds rumbled from all sides. Somebody screamed as the heavy chandelier gyrated loose from the ceiling and crashed upon one of the men.

A sizzling, sputtering sound came from somewhere outside. By the glittering flashes of light I knew it was a broken electric power line. An eerie gust of warm air rushed past me. With a splattering of falling plaster and the straining groan of twisted timbers, the room lurched sickeningly downward, descending like a giant elevator out of control. The farther edges of the huge crack across the floor seemed to rise up before us.

Our half of the room was dropping!

CHAPTER II

Chaos in a Ballroom

JUST before that awful plunge downward, I caught sight of Dad, Megler and Admiral Tyler on the other side of the crevasse. Dad had regained his feet and was running fearlessly toward us.

"Get back!" I yelled. "It's going down!"

He was shouting to me, but I couldn't hear his voice above the awful din. Fritz Megler was flat on his stomach, screaming, his hands and feet clawing and scraping the floor. His stiff-necked body squirmed and twisted as I have seen crocodiles do to escape danger.

Suddenly we went down. The far edge of the crevasse shot upward. I saw the foundation of the building streak past. A water pipe bent far downward and then snapped, blasting a white spray of water over our heads. Dirt was tumbling from the violently shifting wall of earth above us.

The descending half of the building where we were trapped scraped and tore against the wall of the crevasse. The tremendous pressure tilted the floor precariously upward. Unable to cling to this angular plane, Barbara and Mrs. Lawrence, the orchestra and the rest of us at that end of the room were hurled against the lower wall in a jumble of chairs, tables and musical instruments.

An instant later the earthquake ceased as abruptly as it had started.

Stumblingly I forced my way out of the wrecked building into the bright moonlight. My head slowly began to clear as the cold wind beat upon my face. From a distance rose a gradually increasing bedlam of noises—screams of pain and terror, falling debris. A sheer wall of black earth rose abruptly above me for some fifty feet. It extended as far as I could see in both directions.

All about me was the wildest confusion. Roaring torrents of water shot out from a hundred broken mains. Three blocks away I saw a streetcar, out of control, careen over the embankment. Several men leaped out just before it crashed to the pavement below. Up-ended trees hung precariously. Broken high-voltage lines hissed and sparked as they dangled down the cliff.

Terrified people were running about like crazed animals in a forest fire. A man attempted to scale the embankment by means of a hanging cable. His body suddenly stiffened and his hands froze to the wire as the current raced through him. A moment later the wind carried the acrid smell of burning flesh to my nostrils. Several times I saw the rocketing headlights of automobiles plunging over the chasm from severed streets, driven by fear-crazed drivers unable to see the broken pavement or the black pit before them.

Above the wild din I heard someone calling my name. I looked up. Faces were peering over the edge of the cliff. I made out father's white head in the moonlight.

"Here I am, Dad—down here."

"Dan, my boy, thank God you're alive!"

Suddenly I remembered Barbara and Mrs. Lawrence. I found them both wedged tightly beneath a mass of furniture inside the demolished ballroom. A stream of moonlight through a crack in the roof fell directly on them. As I frantically tore away the wreckage, I could not tell whether they were alive.

WHEN I finally pulled them free, both were breathing. Blood oozed from a small cut on Barbara's forehead. I could find no other injury, although I knew she must be badly bruised. Mrs. Lawrence had apparently fainted. Three of the five men in the orchestra were dead, crushed by a heavy beam that had barely missed the women. The other two men were severely bruised. When I had untangled them, though, they were able to stand.

"Hurry up!" I shouted as I lifted Barbara's limp form to my shoulder. "Get Mrs. Lawrence out of here. Another shock and that roof'll come down!"

Barbara recovered consciousness just as I was laying her down on what was left of the lawn outside the building. Almost as soon as her eyes opened, she began struggling to her feet.

"You'd better take it easy," I warned.

"Where's mother? Is she hurt?"

I was amazed at how quickly her mind had cleared. I could not help noticing, too, that her first thoughts were not of herself, but of her mother.

"She'll be all right," I replied as I helped her up. "Just fainted, I think. They're bringing her out now."

While Barbara ran to her mother, I surveyed the prospects of getting the two women over that fifty-foot cliff. I knew it was up to me to get them away from that area, for there was no telling when another earthquake might strike. Dad's white head appeared above the embankment.

"Dan," he called in a tense voice, "were Mrs. Lawrence and Barbara—are they injured badly?"

I knew what he was afraid to ask.

"They're all right, Dad. A few cuts and bruises, but we've got to get them out of here right away."

Another head appeared alongside of Dad's. I immediately recognized the stiff-necked attitude.

"Yes, we must remove them at once." Fritz Megler's voice was strangely calm and decisive. "It's going down again any moment now."

He disappeared from sight. I was amazed by his calmness, contrasted with the fear-mad animal he had been a few minutes ago when the quake first struck.

"We couldn't find a rope," shouted Dad, "so we've tied some drapes together. I'm dropping the end down now. Yell when you can reach it."

Mrs. Lawrence had regained consciousness and was sitting up. Barbara supported her with an arm.

"That's the first time I've ever passed out at one of my own parties," she said with a wan smile. "What happened?"

After I had explained that I thought it was an earthquake and that the ground had sunk about fifty feet, she smiled.

"What, another depression?"

We all laughed a little nervously.

"You'd better hurry, Dan," Dad called down. "We're ready to pull you up."

I decided that Mrs. Lawrence, as an older and less active woman, should be removed from the danger zone first. She insisted that Barbara be the first up. She was so adamant and there was so little time that Barbara agreed. I lost no time in tying the end of the drapery rope securely about Barbara's waist.

"Haul away, Dad!" I shouted.

THE drapes tightened. Barbara rose slowly a few feet off the ground, then stopped. Some loose earth tumbled from the embankment. I could hear Dad, Megler and Admiral Tyler straining and grunting.

"It's no use, Dan," Dad called. "We can't make it. There's too much friction and no footing on the edge up here."

Almost instantly the ground trembled beneath my feet. For a moment all was still. Then renewed cries of terror came from every side.

"Let her down, Dad!" I yelled. "Tie the end to a tree or something solid. I'll have to carry them up on my back."

It was a wild chance. The rope of cotton drapes might not hold the combined weight of two persons. I untied the rope from Barbara's waist.

"Climb on my back," I said, "and lock your legs around in front of me."

She hesitated, looking up at the perpendicular wall rising fifty feet above us.

"But, Dan, can you do it? It's so high and I'm not very light."

"Climb on!"

"All set!" shouted Dad. "Take it easy, Dan. Those drapes may pull apart."

I stood up. Barbara did not seem heavy.

"Now hang on tight. We're going up."

I gripped the rope with both hands. With one foot on the bank, I started up. It was not as easy as I had anticipated. Fifty feet straight up is hard enough for an unencumbered man. Three times the knots in the drapes slipped as they tightened under the strain. Tiny avalanches of dirt were falling in my face. About ten feet from the top, the muscles in my hands and forearms were nearly numb. My grip was weakening. Sweat made my hands slippery. Barbara must have sensed my difficulty, for her whispered words gave me new energy.

"I never knew you were so strong, Danny. We're nearly there!"

A low rumble from below seemed to compress and fill the air around us. The sheer wall we clung to shook violently. A deluge of dirt toppled about us. Above the awful roar Barbara's voice screamed in my ears.

"It's sinking! Mother!"

I dared not look down. Summoning all the strength left in me, I pulled myself up those few remaining feet. I felt Barbara's weight suddenly lessen and then hands grasped my arms. Dad and Admiral Tyler jerked us away from the edge. The ground was shaking with a spasmodic motion.

"All of you keep back!" I yelled. "I'm going down for Mrs. Lawrence!"

With the rope in both hands I leaned momentarily far out over the edge of the cliff. It was the first fairly broad view I had had of the catastrophe, but even now it was a fleeting glimpse. The extraordinarily brilliant Moon, the frenzied wind, continuous landslides, the absolutely deafening reverberations—I actually thought it was the world's doom.

I caught a brief but vivid glimpse of a vast pit, a half-mile-wide section of the city sunk into the Earth. I could not see Mrs. Lawrence. What had happened to her and the two men, I dreaded to think.

Airplanes with searchlights were circling over the area. The speedily gliding beams fell on wildly fleeing human figures, a few tiny groups huddled together in terror, houses strangely undisturbed, others on fire, dark smoke clouds whipped about by the furious wind. All this I caught in one wild flash.

I SUDDENLY realized the sunken area had dropped another fifty feet. The cliff was now over a hundred feet high. The end of the rope dangled far short of the bottom. I might have risked dropping that last fifty feet into the soft fallen dirt, but once down I could never climb out again.

The ground abruptly sagged beneath me. Barbara had broken away from Dad and was running back to look for her mother. The ground gave way completely. I clutched at a tree, pulled myself out as the edge of the cliff slid off into space. I caught Barbara's arm.

"Get back!" I shouted. "It's too late. The whole city's going down!"

We ran through the back alley for several hundred feet—Dad, Barbara, Admiral Tyler and I. What had become of the other guests, I don't know. Megler, too, was missing. Barbara was sobbing.

People whose homes were near the chasm were fleeing with what few belongings they could carry or jam into their cars. When we left the alley, streetcars were hopelessly blocked. Drivers abandoned machines and ran with their families to escape that crumbling, ever-deepening chasm. Through my mind flashed a scene from a motion picture of San Francisco's great earthquake of 1906.

Dad was breathing heavily. For all his seventy years he had carried through the excitement like a young man. I felt proud of him, but I feared what all this exertion might do to his heart.

"We'd better rest a minute," I said. "We're far enough from the edge. It's as safe here as any place."

"Yes," said Dad, catching his breath. "But we've got to help those people down there. Something's got to be done!"

That was like Dad, wanting to help someone else. But somehow I knew there was nothing much we could do. Powers far beyond our control were at work.

CHAPTER III

After Confusion

WE had come into the side street at a point about a block from the chasm. While the others rested, fascination for the horrible drew me down that street to the very brink of the vast pit.

As I approached the jagged edge where the concrete had broken off, I was shocked to find that the doomed area had sunk fully five hundred feet below the surface. I was standing on the periphery of a gigantic circular chasm close to a half-mile wide. I could clearly see the houses and buildings, seemingly undisturbed. The trapped people were no longer gripped by the first wild panic of the disaster. They were either standing in large groups, or moving slowly about.

Dirt and rocks were continually tumbling in from the pit walls as the stricken area sank lower and lower. I thought it strange that practically none of the buildings had been wrecked in the cataclysm, except the relatively few on the very periphery of the huge circular cut. Never have I felt so frighteningly and completely alone. I actually thought I was standing on the brink of Eternity.

A voice to my right startled me. It was Fritz Megler. A strange smile twisted his wrinkled face as he gazed down into the rapidly deepening pit. He was so calm, so utterly transformed from the fear-crazed thing he had been a short half-hour ago, that I thought the excitement of the catastrophe had deranged his mind.

"We'd better get along," he said. His voice was as I have always heard it, giving no evidence whatever of emotion. "Not a thing you can do about it. Not a thing."

His bent, stiff-necked figure moved away.

The piercing scream of sirens jerked me back to reality. A police car and fire engine roared to a stop at the head of the street. The area was being roped off as I rejoined the others. Barbara clutched my arm, looked appealingly into my face. The police yelled for us to leave, but somehow the thought of fleeing to safety never occurred to us.

"Hey, you people get out of here! We're closing this place off."

I couldn't mistake husky, gruff Chief Canlon, lumbering toward us.

"We want to stay and help," said Dad.

"You'll do as I tell yuh! Now get the—" Canlon suddenly caught himself as he recognized Dad. "Why Mr. Norris, I didn't know you!"

"That's all right, Canlon. Looks like this is going to take a lot of hard work. Thought maybe we could help out a bit."

"Say, we could sure use you! It's got us all stumped. We can't figure it out."

Because of his scientific knowledge, Dad had been called upon many times by the Police Department to help solve their problems. He was well known and thoroughly liked by the entire force.

For several hours that night Dad, Barbara, Admiral Tyler and I rode with Chief Canlon while he surveyed the stricken area. What had become of Fritz Megler, I don't know. In fact I wasn't conscious of his absence until sometime afterward.

It was about two A.M. when I noticed that Barbara was near complete exhaustion from worry over her mother. We took her to our home for some rest, well away from the danger zone. Then I left the others to return to what remained of the Lawrence home to salvage what I could of Barbara's and Mrs. Lawrence's belongings.

THE Moon had gone down. A light fog had drifted in across the bay. It was still about an hour before dawn. Disrupted power lines left the streets dark. As I approached the stricken area, all was weirdly quiet. The police had done a good job, there was no one on the streets. It was hard to realize that a great catastrophe had struck the city.

In the fog and darkness I must have missed the police patrol, because I approached the rear of the Lawrence property without seeing anyone. The grounds were just as we had left them. No more had caved in. The house had been squarely split in two. The front half, including part of the ballroom, had gone down. What remained of the rear portion clung precariously on the brink of the chasm.

In the lessening darkness, the fog before me was rolling over the edge of the pit. Like the heavy fumes from dry ice, it was actually descending into the vast hole. That meant but one thing and I shuddered to think of it. The doomed area was still sinking after nearly six hours, and the partial vacuum in its wake was sucking the fog down into the hole.

I hurried to the edge and looked down. A turbulent mass of fog rolled and billowed, as if in the maw of a seething volcano. I thought of the times I had looked down from mountaintops upon a vast sea of clouds. I remembered how difficult it had been to imagine that people were living beneath that impenetrable screen. I knew now that somewhere down in that awful pit were thousands of human beings, trapped, maybe dead.

Out of the foggy depths a dark object suddenly fluttered. It was a pigeon! Bewildered, nearly exhausted, it struggled against the downward suction. For a moment it flew in two large circles, then headed toward the ground behind the house. Then I remembered the game we had been playing only yesterday, yet so long ago.

I caught the exhausted bird as it landed heavily on the ground. Attached to its leg was a small capsule containing a scrap of paper. On one side were the party game instructions, something about reciting Lincoln's Gettysburg Address to the tune of Sousa's "Stars and Stripes Forever." On the other side I found these words hastily scribbled in Mrs. Lawrence's handwriting:

Barbara, my darling:

Hope you are all right up there. Don't worry about me. I am not hurt at all. Don't understand, though, what has happened. The ground is sinking, but that seems to be all. Can feel a continual vibration underfoot, as if a heavy motor were running. Probably the ground rubbing on the walls around us. Am not worried, because I'm sure they'll do something to get us all out safely. Good-by, my sweet,

Mother

P. S. The bottom seems to have dropped from under my party.

Mrs. Lawrence was alive, at least until the time the pigeon was released!

I HURRIED back toward the alley. Barbara and Dad would want to know this good news.

At the rear of the Lawrence grounds I ran headlong into Dad and Chief Canlon. They were with several other men, whom I presently recognized by Canlon's flashlight as city engineers. I was about to show Dad the note when the thought of something Mrs. Lawrence had written struck me like a blow on the head. I slipped the note into my pocket.

"Where have you been, son? We've been looking all over for you."

"Just trying to salvage a few of Barbara's things from the wreck." They didn't seem to notice my empty hands. Dad's face looked exhausted in the dim rays of Chief Canlon's flashlight. "What do you make of it? Found any explanation?"

Dad shook his head. "There just isn't any explanation, Dan. We can't fathom it. Nothing like it in history has ever occurred before. An entire section of a city just dropping into the Earth—it's uncanny! Did you realize, son, that the firm went down with the rest of the city? Our bank, too. We've lost practically everything."

I'd known for several hours about the Norris-Megler Building, but I hadn't mentioned it to Dad.

"Don't worry," I said, trying to be cheerful. "Your credit's good any place. You can always put up another building."

I still knew it was a terrible shock to him. A lifetime of hopes and careful planning was gone.

A stiff northeast wind had come up and was blowing the fog away. In the east the sky was rapidly lightening.

"Come on," said Canlon. "We'll be able to get a good view of it now."

For the first time in his life Dad walked like an old man. I held his arm. When we approached the edge of the chasm, we all stopped as one man.

Never have I experienced the sensation that gripped me when I looked across that half-mile-wide gap, nor do I ever want to feel it again.

"Good Lord!" whispered Canlon.

Dad collapsed in my arms. Up to within 150 feet of the top, the vast hole had filled with water!

* * * * *

Tense months dragged by without further incident. Scientists were frankly baffled by the complete mystery surrounding the cause of the phenomenon. Soundings disclosed that the gigantic hole, now a small lake, extended straight downward into the Earth's crust for more than four miles!

Of the estimated 10,000 persons lost, not a single body was ever recovered from the water.

Scientists and city engineers, forced to release some statement to the public, came to the conclusion that that section of the city happened to have been directly over an ancient volcanic cone that extended downward into the volcanic bowels of the Earth. They explained that subterranean sea action had loosened the foundation and it simply dropped.

Barbara Lawrence had been undecided about completing her college career. Dad and I convinced her, however, that that was what her mother would have wanted most. Mrs. Lawrence had established a small trust fund years ago, specifically to put Barbara through college. Nothing else remained of the Lawrence estate.

Dad's heart had failed, leaving him an invalid. Although his mind was as active and cheerful as ever, he was strictly confined to a wheelchair. Practically his entire financial resources had been invested in the Norris-Megler Institute. With the loss of that he was unable to finance any reconstruction of the firm. Two of the bankers he had known for years had actually gone down in the great catastrophe. Other bankers wouldn't take the risk of loaning Dad the money.

It was not a matter of personal trust. His age and bad heart were the real reasons.

WE had not seen much of Fritz Megler during the months immediately following the catastrophe. Then one afternoon we stopped at his small house. He showed no apparent surprise or concern when Dad told of

[*Turn page*]

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his inability to raise money to rebuild the firm.

He failed even to speak of Dad's illness.

"What do we care, Fritz?" said Dad defiantly. "You and I built the greatest research lab in the world once. We can do it again! It may be hard work, but we've got more experience now than when we started before." Dad leaned forward eagerly in his wheelchair. "I managed to save about five thousand dollars. With that we can equip a small lab and machine shop. It won't take long. I've got several ideas for inventions I've never found time to work on. Now we can do it together! How about it, Fritz?"

I felt proud of Dad at that moment. He was as excited as a schoolboy. A man past seventy, yet he was willing to start life over again!

"I'm afraid you'll have to do it alone, Norris." Megler's voice seemed cold after what Dad had said. "I've got some plans of my own that will require practically my full time. Sorry."

I think that was the hardest blow Dad ever took, even worse than losing the firm. That setback did not stop him, though. Together, during those following three years, he and I built a modest machine shop and research lab. It was not easy. There were times when I thought we'd have to give up. But "Wrench" Williams, one of Dad's former employees, gave us invaluable help. Wrench had shown much promise while with the old firm and was now operating a successful business of his own. He specialized in building experimental machinery and farm equipment in Salinas, California.

During all this time I had lost contact with Barbara. I had written to her time and again, yet each letter went unanswered. I wanted to make the trip back East to see her, but I couldn't leave Dad alone, nor could I afford it. Even if I had had the money, I could not have spared the time.

I was investigating the Oakland catastrophe and a recent discovery made me believe I was approaching the solution!

CHAPTER IV

Commercial Philanthropy

I WAS dissatisfied with the ancient volcanic cone idea, the generally accepted explanation of the tragedy. During my spare time, which was not often, I had attempted some investigating on my own. I found that for nearly five years preceding the great earthquake, seismographs in various parts of the country had recorded minute Earth disturbances. This in itself was not remarkable, because these slight shocks were being recorded all the time, too slight to be noticed without instruments.

By correspondence I checked on all these records and found two significant factors. First, from the great mass of earthquake vibrations originating in many parts of the world, a certain percentage was definitely centered on the Pacific Seaboard, near or at the San Francisco Bay area. Secondly, the minute bay region disturbances occurred at surprisingly regular intervals of between six and eight hours. Six months before the cataclysmic land-sinking took place, these Earth disturbances ceased altogether.

These temblors were never reported, of course, since they were so infinitesimally slight that seismologists thought nothing of them.

Still further pursuing the problem, I examined microscopic samples of the ocean water filling the great hole. I made a painstaking study of volcanology, built models of the Earth and tested different portions under varying types of stresses and strains.

I was about to confront Dad with my puzzle of observations when he wheeled himself into my study.

"Did you just hear the news broadcast, Dan? Fritz Megler's done it?"

I looked up from my microscope and rubbed my eyes. That constant close work was giving me splitting headaches.

"What's Fritz Megler done now?" I asked.

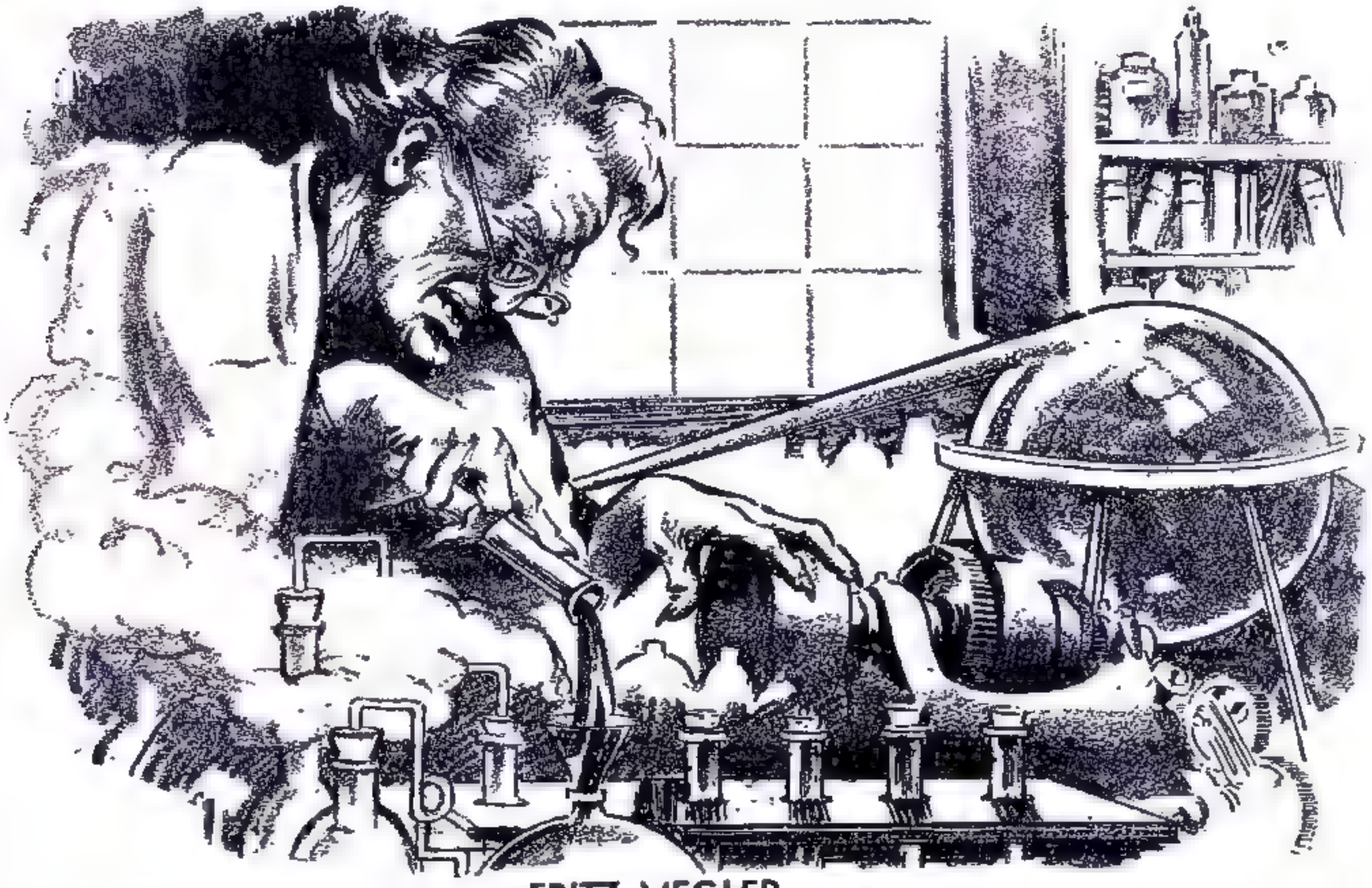
"He's discovered the secret of eternal youth! They've just announced

it over the radio!"

Although I laughed at the idea and the way Dad told it, my mind suddenly flashed back to that birthday party Mrs. Lawrence had given Megler that fateful day. I could still hear his bitter words about the disgusting pathos of old age, still see him standing beside me, peering into that awful chasm.

"Not a thing you can do about it. Not a thing!"

Had Fritz Megler been working on his theory even then? And what had



FRITZ MEGLER

he meant by saying there was nothing I could do about it? Again I remembered that haunting message of Mrs. Lawrence's.

"It's amazing!" Dad cried, breaking into my thoughts. "We've got to hand it to old Fritz. He's really done a marvelous thing. Any man who's smart enough to accomplish such a miracle deserves world acclaim. I must see him. I've got to congratulate him, Dan!"

"After the way he deserted you?"

"Nonsense, my boy. He was under no obligation to me. I want you to wheel me over there. You need the rest, anyhow. You've been glued to that microscope for eight hours without a stop."

I went with Dad largely from curiosity, certainly with no feeling of affection for Megler.

We found he had established himself in an elaborate and expensive suite of offices and had named it the "Megler Clinic." With a great deal of formality a dignified secretary presented us to "Dr." Megler.

"Fritz!" I heard Dad gasp. "Good Lord!"

THE man's appearance was absolutely startling. It had been four years since the memorable day we had celebrated his seventy-fifth birthday, yet before us stood a man no older than his late thirties! The hawklike nose was still the same, but gone were the sunken eye-sockets, the deep facial furrows. While he remained stiff-necked, he was no longer bent. His eyes and face gleamed with a self-confidence which I felt bordered on the supercilious. His once weak and palsied hand was now strong and firm as he coolly shook mine.

"Won't you sit down?" His voice seemed condescending. "I've more or

less been expecting you'd come in to see me."

There was none of the warm feeling one would expect from an old associate. Dad congratulated him, said he was happy to see Fritz doing such a great thing for the human race.

"What I am doing," replied Megler, pacing the floor restlessly, "is far greater than anyone realizes. I am saving mankind from the horror and oblivion of old age. From now on long years of hard work and suffering, such as I went through, no longer will be rewarded by death. Instead it will be everlasting youth, unlimited time and vigor to make real use of that wisdom and experience. I shall change the course of world history, even human evolution, provided the world is willing to pay for this divine privilege."

Fritz Megler had moved over before a large, full-length mirror, where he busied himself in subtle yet obvious self-adulation.

"What do you mean?" I asked. "If the world will pay."

"You'll see!" He nodded his head knowingly as he pushed an inter-office phone button. "Has Mr. Van Deusen come yet? Then bring him in!" He turned to us again. "I want you to meet one of my prospective—patients."

A feeble old man was helped into the room by a liveried chauffeur. A weak, raspy sigh—like a death rattle, I thought—escaped his lips as he relaxed exhausted into a chair. Megler made no sign of introducing us. He merely stared at Van Deusen.

"I've heard about your Fountain of Youth," the old man said in a dry, shaky voice. "If it's true, I want to try it. I'm tired of being old and feeble. I've been to a hundred different doctors, but they just take my money. If you can't help me, then I want to die!"

"How old are you?" asked Megler, unmoved by Van Deusen's impassioned words.

"Eighty-nine, going on ninety."

"And how old do you want to be?"

The old man hesitated for a moment. His weak, filmy eyes wandered slowly to the ceiling.

"Well, I guess I had the most fun when I was about thirty-five. Sure would like to bring back those good old days!"

"I can bring them back to you and easily, too! Let's see now. Eighty-nine to thirty-five. That's a difference of fifty-four years. That will cost you fifty-four thousand dollars—one thousand dollars for each year."

The old man was visibly shocked. I glanced at Dad. His face was drawn.

"Fifty-four thousand dollars?" gasped Van Deusen. "You don't want much, do you?"

"You old fool!" snarled Megler, swinging the old man's chair in front of the mirror. "Look at yourself. You'll be dead in a few months. I offer you the opportunity of a new life, practically guarantee eternal youth, yet you quibble over the paltry sum it will cost you!"

The old man grudgingly agreed.

"Return in the morning for your first treatment and bring along half the amount for a down payment," said Fritz.

WHEN Van Deusen was gone, Megler turned to us. "Now do you see what I mean when I say the world must pay for my discovery?"

"But, Fritz," objected Dad, "do you think it fair to commercialize such a humanitarian discovery? Shouldn't you give it to mankind?"

Megler stood over Dad like a hawk above its prey. His eyes gleamed defiance.

"Why should I? What has the world ever given to me? For twenty-five years I slaved for you, Theodore A. Norris. I sweated thousands of hours over your puny inventions. I made them work. I made the firm of Norris and Megler. But it was always Theodore A. Norris, renowned inventor, who got the credit."

"But, Fritz, it just happened that way. I've never cared for fame. You know that. And you know, too, that I've said repeatedly I could not have accomplished anything without your help."

"But it's still Theodore A. Norris the world bows to. Well, this is one time when you won't get credit for

my work. From now on the world will have reason to remember the name of Fritz Megler."

"Baloney!" I said as I rose to leave.

I saw him then as he had always been deep inside—a man with a firmly rooted inferiority complex. Unlike most such frustrated men, he had at last gained world acclaim. Released from that feeling of inferiority by his great discovery, he had gone to the other extreme and become a supreme egotist. I was thoroughly disgusted with him and was impatient to wheel Dad out of that office.

"I want a word with you, Norris—alone," said Megler, a strange half-smile curling his upper lip.

Dad looked at me and nodded toward the door. I went out unwillingly. After I had been waiting in the reception room for about five minutes, Fritz' secretary walked past me and into an outer office. A moment later she returned. I glanced up just as she was closing the door. In that brief moment I caught sight of a girl seated at a desk in that room. There was no mistaking her profile. The magazine dropped from my hands. When the secretary was gone, I sprang to the door. Barbara Lawrence started as I thrust it open.

"What in the world are you doing here?" I blurted.

I thought I saw in her eyes a momentary flash of pleasure at seeing me again, but her expression quickly turned to one of indifference.

"It's rather obvious, isn't it, Dan?"

She turned her eyes back to the typewriter. Her slender fingers worked rapidly upon the keys.

"You mean you're working for Fritz Megler?"

"Yes. Is there anything wrong in that? I have to work somewhere."

I could not fathom her apparent coldness, it was so unlike the warmly human girl I had known several years ago. Somehow I felt her indifference was feigned.

"But aren't you going to finish college?"

"I graduated in June, Dan. You're certainly not very complimentary to think I needed more than four years."

"That's so." I suddenly remembered. "It has been four years. But why didn't you answer my letters, Barbara? You got them, didn't you?" Before she could reply, I heard Megler's office door open. "Will you have dinner with me tonight?"

"Sorry, Dan. I'm busy."

"Well, where do you live? What's your phone number? I've got to talk to you, Barbara!"

"I'll phone you. You'd better go now."

BUT Barbara didn't phone. I called her many times at her office. There were always excuses for not seeing me. I tried to remember if I had ever said or done anything to offend her. For awhile I thought perhaps she blamed me for her mother's fate, but certainly there was nothing I could have done about that.

In the ensuing month, I worked for endless hours, either upon routine jobs and assignments that came our way, or upon the earthquake investigation. That I simply could not abandon. I sweated over a nightmare of statistics and calculations, searching, constantly searching for what I didn't know. Ever recurring in my mind was a strange notion so absurd that I dared not mention it even to Dad. Yet I felt the solution to the mystery of that cataclysm was somewhere just beyond my reach.

I had lost all track of time. I scarcely noticed that Dad was away during most of the time. I remember asking him once where he was going so regularly, but I was so absorbed in my work that I do not recall what he said.

I had been examining and analyzing samples of the ocean water now filling the pit. A correlation and rechecking of my findings revealed an astounding yet indisputable fact. The sea-water contained organisms found only at extreme oceanic depths! In fact some of the microscopic forms had never been identified before. Yet here they were, actually living near the surface in the now famous Oakland Lake.

It could mean but one thing, of course. The water came not from sea-level seepage from the nearby bay.

but directly from some deep, sub-oceanic source. But how? Why?

If the mighty hole was 21,000 feet deep, what had become of the vast quantity of land, rocks, buildings and people that had sunk into the depths? I dared not let my mind toy with the thought that was constantly plaguing me. It was too fantastic, too far beyond the realm of scientific explanations. But was it?

The sharp jangling of the telephone crashed into my thoughts, sent cold shivers over my body.

"Danny, is that you?" It was Barbara's voice. She spoke in an excited whisper so rapidly that I caught only a few words. "Come quickly—Dr. Megler's laboratory—your father!"

The phone went dead. I immediately called Megler's office, but got no response. It was only then that I realized it was 9:30 and Dad had not come back yet.

CHAPTER V

The Supreme Egotist

AT the Megler clinic I found everything dark. The night watchman said there was no one in the building. I went through with him to make certain. We found nothing to arouse alarm.

Megler's apartment was also empty. He hadn't been there since early morning, said the switchboard girl. Nor was Barbara at hers. By this time I was thoroughly worried. At two A.M. I got Chief Canlon on the wire. By sunrise we had found out exactly nothing.

Miss Elliott, Megler's secretary, accompanied us to his office at seven. I was convinced she knew nothing, but she evidenced neither surprise nor worry over her employer's disappearance.

"It's nothing unusual," she said. "Ever since I've been working for him, he's been away for weeks at a time. Just before he announced his rejuvenation discovery, he was gone for two months."

"You mean he was an old man when he went away, then came back young?"

Miss Elliott nodded.

"Where'd he go?" asked Canlon.

"Doctor Megler never discussed his affairs with me."

"How about this Lawrence girl? Do you think Megler might have told her anything? She was pretty good-looking, wasn't she?"

"Doctor Megler was infatuated with Miss Lawrence," she replied. "But I hardly think he would have told her anything. After all, she was only a typist and filing clerk. But there was somebody—your father, Mr. Norris."

"Preposterous!" I exclaimed. "Dad hasn't seen Megler for months."

"He's been coming here every day for the last month and a half."

Suddenly I remembered Dad's frequent absence from our shop. That would explain it. But why? I felt Canlon's eyes upon me and sensed what he was thinking.

"What was my father doing here, Miss Elliott?"

"He'd been working on some special research problem for the doctor. What it was, I don't know."

We could find absolutely no clue even in the laboratory where she said Dad spent his time. I felt it was rather strange that there was no apparatus in a lab where research was in progress. In fact, even Megler's office safe failed to reveal any significant information.

"Do you know, Canlon," I said, "it looks almost as if everything of importance had been deliberately removed from the clinic, as if someone didn't want any clues left around."

"Yeah, it does, doesn't it?" he agreed, turning to glare at me. "And come to think of it, there's only one person I can think of with any motive. You never liked Megler very much, did you? And wasn't you the beneficiary in your old man's life insurance policy? You could have bumped 'em both off and the girl, too, because she knew too much."

"Listen, Canlon!" I fairly exploded. "If you think I bumped off that old four-flusher, Megler, you're cracked, regardless of what I think he's got

The creatures were dropping down upon me. (Chap. IX)

coming to him. And if you had any brains at all, you'd know how much Dad means to me!"

"Take it easy now, Dan. I only said you could have done it."

Despite Canlon's denial, I knew that he suspected that I was somehow implicated.

LATE in the afternoon I left him. We were both stumped, although Canlon wouldn't admit it. We had traced every possible lead. Extras had just come out. They hinted Dad might have had something to do with it. I began to wonder myself. Why had Dad gone to work for Megler? But if Megler was the guilty one, why had he found it necessary to abduct or kill Dad and Barbara?

I was exhausted, completely at a loss. I wanted to be alone, to think. At the shop I found a letter from the Seismological Station at Berkeley. Complying with my request, they had sent me a complete record of all Earth disturbances recorded there during the four-year period from the Oakland quake of 1948 to date.

In five minutes I knew my worst fears were confirmed. At intervals so regular as to be uncanny, minute earthquakes identical to those preceding the Oakland catastrophe were occurring now. But this time they were centered across the bay in the heart of San Francisco!

I was completely confused. Before the Oakland quake the preliminary tremors lasted five years. This last series had been going on only four years. I was afraid to warn the city of San Francisco that it was doomed to a fate like Oakland's.

I got Canlon on the phone.

"Did you trace that call of Miss Lawrence's last night?"

"Of course," answered Canlon's weary voice, "but it don't prove much yet. It came from the Alameda exchange. That's all the operator could tell. My men are tracin' every phone in that district. Probably take a long time, but they'll find somethin' sometime."

"Thanks, Canlon. I'll be seeing you—sometime."

I hung up, dialed the operator and sent a telegram.

BERKELEY SEISMOLOGICAL STATION, BERKELEY, CALIFORNIA
DO NOT UNDER ANY CIRCUMSTANCES MAKE PUBLIC INFORMATION CONTAINED YOUR LETTER OF YESTERDAY STOP STRICTLY URGENT STOP WILL CONTACT YOU LATER DAN NORRIS

The record of Earth disturbances they had sent me was not tabulated, but there was a remote possibility that someone might reach the same conclusions I had. My plans could not allow me to take the chance.

In fifteen minutes I was speeding along a side road paralleling the bay between Oakland and Alameda. I was convinced that the solution of the puzzle lay close to the ocean and Fritz Megler. If my hunch were right, I had only to confine my search along the waterfront within the Alameda exchange district. It might take some time, calling at every house, but if luck were with me I might find—a secret laboratory!

By ten o'clock I'd covered about three miles of the bay front. A heavy fog had rolled in. The night was cold and dreary. I had driven about three-quarters of a mile from the last house I'd examined when my headlights caught the dim outline of an iron gate across a roadway to my right. As I swung my car into the drive, I saw that the gates were partially open.

A massive old building loomed up in the road. Heavy vines covered the walls, enshrouded the roof, seeming to obey Nature's edict of jungle camouflage. A dim light from an upper story window barely pierced the choking vines and the smothering fog.

I shut off the motor, coasted silently to a stop before the building. I could not see the bay, but the fog was thick with the smell of it. I rang the doorbell several times. Not a sound came from the dark, bleak structure. I walked around in back of the house, pulled out my flashlight. The garage was empty.

"This is no laboratory," I said to myself. "Just someone's old summer residence, closed for the winter. People often leave a light burning when

they are away."

I returned to the car. As I stepped to the running board, I glanced once more at the house. The light upstairs was gone!

I HESITATED. Probably an old caretaker didn't want to be disturbed at that hour. I got in the car, turned on my lights. My eyes instinctively followed the beams. In the soft, moist gravel of the drive were two narrow parallel ruts about two and a half feet apart—the tracks of Dad's wheelchair!

I sprang to the front door. This time I didn't bother to ring. The door was bolted. So was the back. I tried all the windows on the ground floor. Before I had not noticed that they were barred. The heavy vines gave easy access to a second-story window. Climbing into the room, I saw a faint crack of light coming under the door. For a few seconds I listened. Not the slightest sound came to my ears. I turned on my flashlight.

Instantly all doubt left me. Newspaper clippings, photographs of Megler covered the four walls. Over a desk was a series of pictures showing Fritz Megler as a boy, a young man, on up to his old age—and then back again, obviously taken after his rejuvenation discovery. Wherever his name appeared in a caption or part of the text, he had red-penciled it. Several older photographs showed him with Dad before the Oakland Quake. He had either underscored his own name or scratched out Dad's.

"Blasted egotist!" I muttered.

In the hallway a light was burning. Several doors, all closed, were on this floor. In each I found an amazing amount and assortment of scientific paraphernalia. Most of it was carefully covered or in glass cases. Downstairs on the main floor was still further equipment. Nothing was of particular significance, only what might be expected in a thoroughly equipped research lab. I was impressed, though, by the vast quantity of it. Here again, as in the room above, were innumerable framed photographs and news clippings of Megler.

I was positive that I was not alone in the house. The sudden disappearance of that first light I had seen convinced me of that. Now, as I moved cautiously through the lower floor, I had the distinctly unpleasant conviction that someone was watching me. The entire atmosphere was thick with evil. A heavy odor of musty age mingled excitingly with the smell of modern chemistry.

Just as I was moving down a long, black corridor toward the rear of the house, I thought I heard the faint sound of hurried footsteps at the other end. I raced there. Two doors faced each other. I opened the one on the left. My flashlight illuminated a flight of narrow stairs leading down into darkness. On the wall at the head of the landing was a light-switch. I snapped it on, but nothing happened.

I hesitated, flashed my light back along the hall to make certain no one was waiting to jump me from the rear. Then I ran quickly down the stairs. The rays of my flash showed an ordinary basement. There was nothing of interest—at first glance. I was about to ascend the stairs again when my eyes fell momentarily upon the cement floor.

In the dust were the tracks of Dad's wheelchair!

CHAPTER VI

The Impossible Truth

QUICKLY I searched the entire basement, but without success. I could find nothing save those two telltale lines ending blankly in front of a large furnace. That was Megler's mistake. He should have erased the tracks and given me no reason to examine that trick furnace. I tested every part. When I turned up the draft, on groaning hinges the entire front swung slowly open.

The searching beam of my flashlight revealed a great room, so fully equipped with tools and machinery as to resemble a small factory. There were signs of recent metalwork, for-

gery, welding. Steel braces and scaffolding gave evidence of the construction of something that was no longer present, a large steel sphere about ten feet in diameter. I found the mold from which the device had been cast in molten steel. On a nearby workbench were chipped and broken fragments of fused quartz.

Beneath the scaffolding and girders was a twenty-five-foot-long pit filled with water. At the end were two heavy gates, resembling a canal lock, with a small door to their left, at the end of a narrow catwalk paralleling the pit. I opened it. Beyond was a narrow canal, leading out into the fog-shrouded bay.

Why had Megler built the steel sphere? Could it have anything to do with his rejuvenation work?

From somewhere at the far end of the room came the muffled sound of a human voice. I snapped off my light. Once again came the indistinguishable words, then utter silence.

I crept cautiously through the dark toward the source of the sound. In a small anteroom I found a well equipped short-wave broadcasting outfit. Faint sounds came from the loudspeaker. The voice must have come from there.

For a moment I hesitated, waiting.

Again I heard sounds from the speaker, this time as if someone were moving close to the transmitter. With my heart pounding heavily, I put my lips close to the microphone.

"Go ahead," I said, muffling my voice. "I am ready."

Almost instantly a strange singsong humming came over the speaker. A weirdly accented voice spoke in slow, measured English.

"Hello. This is Vandor speaking. Is that you, Megler?"

"Hello, Vandor," I replied huskily. "This is Megler."

"What is wrong? I expected you down here three vads ago."

"Be there soon," I said gropingly. "I've had a little difficulty getting away. How is everything—down there?"

"Things are not going so well. Our toxin is running low. The fluid medium is already exhausted. You know, Megler, I'm having trouble with that mob outside the palace. They shriek constantly for more. What is worse, the Mighty One is exceedingly angry. Unless you deliver that extract he threatens to have your supply cut off. But what worries me, Megler, is that he swears he will throw me into the low-pressure tanks with your fellow surface men. When will you be here?"

MY problem was to trick the fellow into telling me where he was broadcasting from, without letting him know I was not Fritz Megler.

"Listen, Vandor," I said. "Last night I tried to talk to you, but I think someone intercepted my broadcast, tried to impersonate you. I've got to know for certain that I'm really talking to you now and not someone else. Our whole scheme depends on it."

"Of course it's I, Megler. You ought to know my voice by now."

"That means nothing. Anyone can fake a voice. Tell me exactly where you are now. That will give me proof. You and I are the only ones who know the location of your transmitter—unless you have been talking, Vandor!"

My trick sounded childishly crude and I held my breath for his answer.

"I haven't talked! But as you wish. This is Vandor Val, broadcasting by short-wave from the inner temple vault in the city of Aqualia at the bottom of what your people call the Pacific."

The voice in the speaker suddenly stopped. I heard the sound of a door opening, then an exclamation of surprise from Vandor.

"Megler!"

"You fool, whom have you been talking to? Shut that thing off!"

With a sharp click the reception went dead.

There could be no doubt about it now. The spherical mold out there in the factory, the water locks, the canal leading to the bay—all pointed to the unbelievable fact that Fritz Megler had constructed a bathysphere and was somewhere at the bottom of the Pacific Ocean!

The sudden thought of the danger-

OLA, THE MIGHTY

ous fate to which he had undoubtedly dragged Dad and Barbara, the full import of the realization that Fritz Megler was connected in some way with the great Oakland catastrophe, momentarily dulled my senses. Then I grew conscious of a sound coming from the workshop, the heavy groan of metal on metal. The furnace door was opening.

I put out my light, stepped to the door of the radio room. For a long moment I listened, peering across the blackness of the factory. Dimly in the basement beyond the furnace I thought I detected the momentary movement of faint light. I could have sworn I saw the outline of a man's figure.

Through that furnace was the only way out, unless I wanted to risk swimming across that canal beyond the locks. I thought of Barbara and Dad, of those Earth tremors that were going on right now somewhere beneath San Francisco. Something had to be done quickly.

Those next five minutes seemed endless. Then I sneaked across that dark workshop, through the trick furnace and up those basement stairs to the main floor, fully expecting someone to jump me at any moment. I unbolted the front door and ran headlong into four men.

"Grab that guy, Nick!" rasped a gruff voice.

"Canlon!" I exclaimed. "Am I glad to see you!"

"Yeah? Well, we'll do without the kisses. What're you doin' here, Norris?"

Chief Canlon's grizzled face, bushy eyebrows nearly touching, confronted me out of the darkness.

"I've been looking for Dad and Megler and Miss Lawrence."

"Well, where are they?"

An unimaginative old-timer like Canlon would never believe what I had discovered there, least of all its fantastic significance. I had had trouble believing it myself.

"They're not in there," I said, jerking my head toward the building. "I don't know what's become of them."

THE chief was deliberately shining his light in my eyes, trying to confuse me.

"The devil you don't!" he growled. "I'm takin' you to Headquarters and you're gonna tell me just what you know about those three. You won't give me the run-around again, young fellow!" He nodded to the officer who had grabbed me. "Hang onto him, Nick. We're goin' in to have a look around."

The instant Canlon and the other two men were inside the house, I let Nick have a beauty, square on the point of his jaw. I hated to do it, but there was no time to waste.

I sped back to Oakland. San Francisco was teetering on the brink of a horrible catastrophe. My father and the girl I now realized I loved were somewhere at the bottom of the Pacific Ocean, at the mercy of a power-crazed egomaniac. And there was nothing I or anyone else could do about it! Harassing my thoughts, too, was the distressing possibility that Dad himself was in some way involved with Megler. Why else had they been working secretly together?

At one A.M. I reached our lab. Searching Dad's private files, I found a small model of a bathysphere, perfect in every detail! Appended to the file were patents taken out ten years ago in Dad's name. There were also two sketches and detailed plans of a remarkable glass diving suit, something entirely revolutionary.

It was of a type of heat-treated borosilicate glass which apparently was capable of withstanding both tremendous heat and unheard-of pressure. From what I could gather from Dad's notes, it was what he referred to as "shrunk glass." In the process of its manufacture, nitric acid eats away the softer components of the borosilicate and leaves the much-shrunken harder components. It was a refinement of a process first described in 1939 by Nordberg and Hood of the Corning research staff.

An integral part of the diving suit was a device for liberating oxygen from sea-water, which meant—if it worked—that a diver would no longer be dependent upon a surface supply of air. He was free to move independently on ocean bottom, regardless of great pressure. The sketch was dated the day after Dad started working in Megler's office!

Considering coldly the bare facts I had discovered—the periodic Earth tremors beneath San Francisco, identical to those preceding the Oakland catastrophe, the unidentified marine organisms, Megler's private lab and what it revealed, the radio message, the bathysphere patent in Dad's name, the glass diving suit—all those things left but one logical course open to me. I must make public my findings, warn San Francisco.

At 1:30 A.M. I heard several cars pull up in front of the building. I grabbed the model and plans, turned out the lights and ran out the back door.

Three hours later I was in Salinas, California, pounding on Wrench Williams' door. Sleepy,eyed, curly red hair disheveled, broad shoulders bulging at the flimsy pajama coat, he finally answered it.

"Dan!" he exclaimed. "What're you doin' down here at this hour?"

"Quick, Wrench, give me the key to your garage. Got to hide my car. The police are after me."

Wrench was wide-awake when I returned to the house.

"What's wrong, Dan?" he asked, pulling on his trousers. "Have they found your father or Megler?"

"That's why I'm here, Wrench. I need your help and I need it badly."

I knew I could trust Williams. He had been one of Dad's most faithful workers. So I told him everything I had discovered, everything I suspected about Megler.

"Boy!" he breathed. "If anybody but you had told me that, Dan, I'd figure they was plumb bats. What're you plannin' to do about it? What *can* you do?"

"You and I are going to build this," I said, uncovering the bathysphere model and setting it on the table. "I'm going to the bottom of the Pacific Ocean."

OFFHAND it would seem that my decision to make such an undertaking was foolhardy, but I had carefully reasoned the problem out during the long drive to Salinas. I knew

Megler. I knew that he would be afraid to return soon. He knew after that accidental radio conversation I'd had with Vandor Val that someone had discovered his laboratory and radio transmitter. Whatever his connections with the Oakland crisis and the one impending now, Fritz Megler would have to be hunted down. And I was convinced the hunting ground was somewhere in the deeps of the Pacific Ocean.

This is not the place for a detailed account of our construction of the full-sized bathysphere. Following, however, are the general specifications:

Steel bathysphere .....diameter 10 feet
(spherical shape was found by Beebe to be strongest)
Walls *(minimum thickness)* .... 6 inches
4 observation windows *(front, 2 sides and rear)* 3-inch fused quartz .....diameter 6 inches
Combination entrance-escape chamber *(double safety doors)* diameter .....16 inches
Weight *(approximate)* ..... 6 tons
Propulsion by synthetic radium engine on twin screw propellers
Steering control by both automatic and manually operated
Gyroscope synchronized with radium engine
Main oxygen supply by sea-water electrolysis

We followed the design of Dad's small model as closely as possible. But there were weeks of tedious study and measurement, new plans, blueprints redrawn, every detail carefully worked out long before Wrench and I ever started to build the molds into which we finally poured the best open-hearth steel we could buy.

Besides the bathysphere, the glass diving suit had to be made. Compounding the formula, rolling and shaping the glass, pressure tests and countless other details consumed invaluable hours. At the last moment we installed a two-way radio in the bathysphere. Although it meant further delay, I felt the necessity of keeping in constant touch with Williams, just in case.

Wrench put in every cent of his savings, all he'd made from the little garage, his gas station, the workshop he'd built in Salinas. I had nothing but my skill. Between us, though, we duplicated what Megler with his extorted fortune had done.

CHAPTER VII

Going Down!

THE night we finished, Mrs. Williams came out to the shop.

"I'm terribly worried!" she cried. "There's been a man watching the place all evening. I saw him leave only just a minute ago. Are you sure you boys are doing the right thing? If anything happens—"

She tried desperately to hold back the tears.

"Nothing can happen to Wrench, Mrs. Williams," I said, trying to reassure her. "He's done nothing wrong. I've just written and signed a statement for him to give the police, if they try to accuse him of anything. It absolves him of all blame."

"But, Mr. Norris, isn't there some law about aiding a—a criminal? I know you're not a criminal, but maybe the police won't listen."

"They'll listen plenty when I tell 'em," promised Wrench.

By midnight we had loaded the big steel ball on Wrench's heavy truck. Our plan was to haul it the twenty miles to Monterey and launch it from the public pier. To avoid the danger of my being recognized, we agreed that I should ride inside the tarpaulin-covered bathysphere. If we were stopped, Wrench was to say that he was trucking a piece of experimental machinery to the Army Presidio at Monterey.

I did not like the feeling of being confined. As the truck pulled out into the street, I climbed out of the bathysphere. Peering through a fold in the tarp, I saw a man run across the street, motioning for Wrench to stop. He flashed a badge.

"What yuh got in that truck, bud?"

"Just some stuff for the Presidio at Monterey," said Wrench wearily. "Why?"

"Never mind why. I got orders to

search this load."

I slipped out from under the tarp and dropped to the ground. When the detective came around behind, I leaped at him.

"Norris!" he exclaimed, just before my right caught him on the left side of his jaw.

Wrench caught him as he went down.

"Drag him over there on that front porch," I said. "He'll be okay."

A few moments later we were thundering down the highway toward Monterey.

"I dunno whether you should have hit him, Dan," Wrench muttered, keeping his eyes glued to the winding road. "Resistin' an officer ain't so good. When that guy comes to, he's gonna hop on a phone. They'll be after us from all directions."

"I had to do it, Wrench. There's too much at stake to risk wasting time with Canlon and his boys. We've got to get this thing in the water. Then they'll never stop me!"

He shook his head. "*If* we can beat 'em to the harbor!"

We rolled into Monterey. The town was silent. Without incident we drove out to the end of the public pier. Wrench turned off the lights. A quarter Moon, brilliant stars—unusual for fog-ridden Monterey—the riding lamps of empty boats gave us our only light.

I was surprised at how quietly we accomplished the task. In five minutes the heavy steel ball was over and into the water. I gripped Wrench's hand for a brief moment. Neither of us spoke a word.

Quickly I slid down the cable to the upper hatch. Before releasing the cable, I dropped down to the motors. We had tested them thoroughly in Salinas, so it took but a moment before they were throbbing gently. There was no need to test the oxygen electrolysis apparatus. It worked directly off the engines, or could be manually operated. There was nothing to do but shove off.

As I climbed up through the hatch, I heard the wail of an approaching siren.

"Dan!" Wrench was calling. "You better cut loose. They're comin' now!"

I HEARD the screech of rubber on pavement, then the rumbling clatter of the boards on the pier. I unsnapped the cable. As the bathysphere swung free, a police car stopped at the railing. Four men leaped out. A flashlight caught me in the face.

"The game's up, Norris. You're under arrest."

"Don't be a fool, Canlon!" I shouted. "If you stop me now, you'll regret it the rest of your life. Wrench, give him that letter I wrote."

I slammed the hatch door and bolted it tight. The last fleeting glimpse of Wrench leaning anxiously over the railing, Canlon's angry voice roaring across the deserted harbor, a starry sky overhead—would that be my last memory before the waters closed over me and the bathysphere?

I bolted the safety door, for there were double hatches to insure against possible leakage and serve as an escape chamber. Then I dropped down to the driving seat, turned on the powerful quartz-arc searchlight and viewed the immediate harbor bottom. Anchor-buoy cables would be my chief obstacles in making for the open sea. I thrust the gyro throttle toward the negative pole. The great steel monster began to sink. Three feet from the bottom I engaged the forward gear.

For the better part of an hour I maneuvered back and forth in the harbor. Giving her a good test to get the feel of the controls, I was amazed at the mobility of the heavy craft. The narrow limits of the harbor prevented a thorough test of speed, but for a stretch of three hundred yards I got it up to a rate of fifty-eight miles per hour! Wrench and I had calculated an absolute maximum of fifteen miles per hour. When I flashed by a submerged hulk and only barely avoided a collision, I was convinced.

The gyroscopic steering device proved even better than I had hoped. Its principle was fundamentally the same as the radio depth-sounders on

all ocean liners. Radio waves, sent out from ships, were reflected on the ocean bottom and then picked up again, the time lapse between sending and receiving thus giving an accurate depth determination. On the bathysphere, however, this principle was synchronized with the steering, diving and propulsion engines.

Whenever the radio waves indicated that the bathysphere was approaching any solid obstacle, the gyroscopic rudder automatically avoided the obstacle. It was so carefully worked out that it automatically stopped the craft if an insurmountable hazard was approached. It could, of course, be manually operated, too. I found myself wondering constantly why Dad, with such a revolutionary development in this submarine craft, had chosen not to use it commercially.

I was well supplied with food. The electrolysis machine worked like a charm, converting sea-water into air and drinking water. An air test showed that the chemical trays were busily absorbing carbon dioxide and other gases. I was not able to try the diving suit or radio. Wrench and I had arranged to communicate first at six o'clock that morning, which would give him time to get back to Salinas.

I rose to the surface about fifty yards from the pier. Through the periscope I could see Williams and Canlon still leaning on the railing. I saw Wrench wave his arms jubilantly as I gave our prearranged signal of "all's well"—raising and lowering the periscope twice.

SO, at three A.M. on the morning of August 3, 1952, I sank beneath the surface and headed for the open sea.

It was not until I had actually quit the harbor that the immensity of my undertaking fully dawned on me. A puny man-thing, sealed into a ten-foot steel tomb, I was venturing out into the world's largest and deepest ocean in search of three equally tiny human beings somewhere in the black, unexplored depths of the mighty Pacific! The remainder of my problem was no less stupendous—to thwart a catastrophe which I was convinced threatened San Francisco. . . .

My immediate objective was to follow the coastline north to the Golden Gate. There I would pick up Megler's trail, for he had left one. I had plotted it from careful calculations, based on the angle of the directional radio transmitter in his basement workshop. By plotting the elevation of the transmitter and knowing its angle of inclination downward, I was able to establish the probable contact point on the ocean floor.

From available oceanographic maps, which at best were almost useless since little of the ocean floor had been explored, I found this point of contact to be in or near what must have been an undiscovered foredeep about 800 miles northwest of San Francisco and about four miles below the surface.

After leaving Monterey, I kept well within three miles offshore and at an average depth of 150 feet. Except for occasional forests of seaweed and a great number of smaller fishes, this zone appeared to be an utterly monotonous level plane.

With the approach of dawn and the rising of the Sun, the sea took on a gorgeous array of multitudinous colors. The quartz glass of my observation windows allowed a remarkably clear and unobstructed field of vision. I felt exhilarated. Everything was functioning to perfection. The heating system, working off the engines, kept me comfortably warm. The moisture-absorbing calcium chloride kept the humidity at exactly the right percentage. Tests proved the air to be even purer than free atmosphere.

I set the automatic pilot and climbed aloft to check the double hatches. There was not a drop of water visible. I patted the walls affectionately. They were now my protecting armor against the crushing pressure of my new and unfriendly environment. These mighty steel walls would have to withstand the weight of the entire Pacific Ocean. I looked at the outer pressure gage. It read fifty-five pounds per square inch and I was down only 150 feet!

At sea-level the atmospheric pressure is about fourteen and a half

pounds to the square inch, so the 2160 square inches of an average man's body withstands a total atmospheric pressure of about fifteen tons. If I had been down 150 feet without the bathysphere's protection, the pressure on my body would have been sixty tons. But I was planning to go down to a depth of at least five miles, which meant five tons per square inch, or a total of more than a hundred thousand! The bathysphere itself might stand it, but what about the glass diving suit? I hoped I wouldn't have to try it.

CHAPTER VIII

Life in the Dark

AT a quarter to six I rose to the surface outside Golden Gate. It was still fifteen minutes before Wrench would be at his radio. Wondering if Canlon had released him, I thrust up the periscope for a last look at the California hills I loved so well.

A big freighter was just plowing out through the Gate, only about two hundred yards away. Someone on deck had spotted my periscope and the upper hatch of the bathysphere. Soon the whole crew had rushed to the deck. When I finally sank beneath the waves, I knew what they were probably shouting among themselves. They would report the incident and the papers would scream about the U-boat trespassing in our territorial waters.

I swung around due west, thrust the throttle forward and headed down at a sharp angle. In spite of the distance I had to travel, there were two reasons why I started diving so soon, instead of cruising on or near the surface. Currents and storms would have slowed down or otherwise interfered with surface travel, whereas at greater depths the ocean was free of these disturbances and travel could proceed in a straight line.

My other reason was to explore as much of the ocean bottom as possible between San Francisco and the point established on my map. The inclination of Megler's directional radio transmitter might have been in error and I couldn't afford to waste time by missing my goal, wherever it was.

At six A.M. I snapped on the radio. Almost immediately I contacted Williams.

"Dan!" came his excited voice. "Thank the Lord, you're okay! Where are you now?"

"Everything's working swell, Wrench, better than we'd hoped. I just left the Golden Gate. I'm heading out to sea now. Depth gage reads five hundred feet. Did you have any trouble with Canlon?"

"Not exactly. He's here now, wants to talk to you."

"Okay, put him on."

"Hello, Norris," said the chief's deep voice. "I read that signed statement you gave Williams. I'll be hanged if I can understand how the son of a brilliant man can be such an ass!"

"If you haven't brains enough to realize now what's going to happen to San Francisco, you're a bigger fool than I thought. I haven't time to worry about what you think. I'll make a bargain with you, Canlon. If I succeed in what I'm trying to do and get back alive, I'll give myself up. If I don't—well, I'll be dead, anyway. All I ask is that you leave Wrench Williams alone.

"He had absolutely nothing to do with Megler's or Dad's disappearance. He's only trying to help me stop the worst catastrophe that ever struck this country. Leave him alone so he can work that radio. And one more thing. Don't tell the newspapers about any of this. No use starting a panic now. I'll let Williams know when and if it's time to warn San Francisco. Is it a deal, Canlon?"

I could hear him talking to Wrench. Finally he returned to the transmitter.

"All right, Norris, it's a deal. But I still don't believe any of this crackpot nonsense. I'm putting a man on here with Williams. I reckon you'll kill yourself and save the state the expense of an execution, but I don't want Williams to get away, too."

"Okay, fathead. But I hope I live long enough to see you squirm. Put

Williams on again."

"What is it, Dan?" Wrench asked.

"I'll try to contact you every three hours, starting now. But keep your receiver on all the time, just in case I want to get you."

"All right." He was silent a moment. "Canlon just left the room. I was listenin' to the early newscast this morning. San Francisco had an earthquake last night."

"How bad was it?"

"Not very strong, but I'm afraid it's comin'."

FOR hours I plunged westward at a speed averaging forty-five miles an hour. I was still well within the bathyal zone, which extends down the long continental slope from a depth of six hundred to about six thousand feet.

Marine biologists have no conception of the teeming numbers and infinite variety of life that exists within this bathyal zone. For one solid hour, as I passed to the thousand-foot level, I was literally bombarded by fish. At the speed I was going, vast schools of them would appear suddenly out of the gloom in front of me. Then, like pellets of hail, they would batter against the bathysphere as I plowed through them.

At a thousand feet it was almost totally dark. I had the feeling that I was hanging motionless in the vast void of a deep-blue gloom, as I imagine it must be out in interstellar space. The only time I sensed any motion was when fish would suddenly zoom into the arc of my searchlight. Even then I felt that they were moving toward me and that I was standing still.

Shortly before noon that day I passed Beebe's famous half-mile-down mark. It was now absolutely dark. Several times I shifted to the automatic pilot so that I could safely turn out the searchlight. Yes, there were those brilliant flashes of light Beebe had described—'headlights' carried by certain deep-sea fish. Several times they smacked against the forward observation window and each time the light flash would momentarily blind me with its brilliancy.

I had a sense of uneasiness, traveling with the automatic pilot in control. Although I had no reason to doubt its efficiency, I preferred the feel of the wheel in my own hands, which was a natural human tendency.

At the two-mile level I was speeding along smoothly at fifty miles an hour, using the manual controls. According to my oceanographic maps, based on ship soundings, I was still a half-mile from bottom. I was looking down, studying the various gauges and meters on the panel board. When I raised my eyes again to the window, I could actually feel the skin contract along the nape of my neck. Out of the abysmal darkness, not seventy-five feet ahead, loomed a grotesquely shaped mass of rocks!

With all my strength I shot the gyro-rudder to the left and jerked the throttle back to full reverse. For a horrible instant a shudder racked the bathysphere. I felt it swing to the left and then nose up slightly. My feet shoved against the floor, my muscles tensing for the awful impact.

[*Turn page*]

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There was a terrific crash. Every light went out, leaving me in utter darkness. I waited for the water to pour inside and crush out my life.

Instead the lights came on. A hasty examination revealed not a single crack in the hard shell of my bathysphere. I resumed manual control again and found I'd cracked into a mountainside. Rising over the range, I followed the next canyon down.

It was not until my next attempt to communicate with Wrench that I learned the crash had smashed my radio. I tried for awhile to repair it, but soon gave up. Mounting it in a crashproof panel would have made it as stupendously strong as the rest of the craft. Unfortunately the inventor had not allowed for human imperfection, though.

IN the next few miles my instruments recorded a more rapid descent. As I traveled down the continental slope that would eventually level out into the flat ocean bottom. I must have been well over halfway to my destination, but what that would be, I had no idea.

The quantity and diversity of sea-life never once diminished. It was becoming increasingly difficult to make out the exact shapes that hovered quite near the ship. Only when they darted in front of my powerful searchlight could I obtain a good look at them. Some I recognized, but the majority were strange creatures, outlandish and beautiful. A few were so large that I had to make short detours in order to avoid colliding with them.

Except for the faint hum of the gyro motor and the occasional thud of some fish as it flopped against my craft, all was silent as intergalactic space. This awful quiet and darkness, save in the path of my searchlight, created an overpowering urge to sleep. I shut off the manual controls and lay down on a blanket.

I awoke much refreshed. The chronometer showed that I had slept for eight hours. I hadn't meant to waste so much time, for I begrudged every minute that I had lost. Reason told me, however, that I must conserve my energy.

After eating, I gunned my craft ahead full speed, but in less than a minute the motor suddenly stopped. The bathysphere glided to a halt. There was a problem ahead that the mechanical brain could not cope with, so the motor had stopped. I tried to peer out the front observation window, had to wipe away the condensed moisture that my breath flung against the cool surface.

I could see nothing save a lazy squid, the size of a small cow, perched on an ooze-covered rock. But there must be something beyond it that the sensitive sounding device had picked up and found impossible to avoid.

I shifted gears, moved the craft slowly forward past the squid on the rocks. Faintly now, in the far reaches of the light, I could just make out a shapeless black mass. I moved closer, swung the arc of my light far up.

At a depth of two miles, where no plant-life was thought to exist, loomed a gigantic forest!

The fantastic jungle was a mass of gorgeous color, unseen until my searchlight revealed them in their full splendor. Great trees extended far beyond the farthest limit of my searchlight. My amazement at the sheer beauty of this jungle on the ocean bottom soon gave way to a bitter realization. The path to my unknown destination lay straight ahead. However gorgeous to behold, that thick-tangled mass would be impossible to pierce with my little craft, despite its power.

I hated to sacrifice the precious depth that I had already gained. There was no alternative but to turn and skirt the forest, though, hoping to round it eventually and resume my interrupted course.

OCCASIONAL trees and thickets grew out beyond the general boundary of the jungle. While passing to the right of one of these lone sentinels, my craft came within twenty feet of the main jungle's edge. Suddenly a giant form whipped out of the shadows on my right.

There was a collision which sent a shudder through the sphere. The snake-like monster twined around the craft and I felt myself lifted up from the ocean bottom, pulled in toward the jungle.

My bathysphere was upside down. I had been hurled against the walls and ceiling. Somehow I managed to kick the accelerator open, which revealed the nature of my captor. I was being held in the rigid clutches of an aquatic vine. I caught sight of the tree from which the plant tendril was growing, just as my vessel plowed forward.

But like a toy submarine fastened to a child's string, my craft floundered in the water. The plant vine held tenaciously, continued to draw its prey closer and closer to the thick forest. I tried slowing down to a stop, then speeding up suddenly. I hoped to tear loose this way by the surprise of the sudden acceleration, but the huge suction cups on the underside of the stem had fastened in a powerful grasp.

The vine pulled me below the base of a large tree with a smooth, slippery-looking bark. I saw a huge purple blossom slowly descend toward me. The impression was that of a snake's undulating neck with the blossom as its head. The spotlight revealed a circular row of tooth-like thorns arranged about the inside periphery of the open blossom.

I had no intention of letting this plant devour my ship, however impossible it would find digestion to be later. But I was going to make sure that those teeth didn't crack us in the process of finding out just what poor food we really were.

I quickly slipped into my *Z*-glass diving suit and adjusted the helmet over my head. *Z*-glass is probably the strongest material known, yet it is amazingly light. My diving suit was so equipped with double-faced layers that it was possible to live inside for an extended period. Even the obtaining of food through the suit had been considered.

I adjusted the small oxygenerator to my back and connected the two tiny tubes into my helmet. Grabbing up a huge ax, I stepped into the pressure compartment and bolted the inner circular door firmly against its rubber-cuprous washer. Then I turned the flood-valve and allowed the water to quickly fill the compartment. Slowly I rotated the pressure wheel and breathed a fervent prayer.

Wrench and I had never had time to test the suit.

CHAPTER IX

The World Below

THE pressure gage showed the outside pressure to be only 1360 pounds per square inch, exactly the same as it had been at 3020 feet, though I was now two miles below the surface. I had the full outside pressure against my glass suit now. Could it be that water pressure ceased to increase beyond a certain depth, or was the gage in error?

There was a sudden jolt and scraping jar against the bathysphere. I threw open the outer door and leaped out just as the thorny teeth of the aquatic blossom were clamping around the top of the vessel. My muscles, reacting normally, sent me plowing slowly through the water for about six feet.

The tendril still retained its hold on the bathysphere while the blossom attempted to masticate its indestructible victim. My ax descended in slow-motion, but it landed straight and clean. It cut right into the tubular stem at the blossom's base and sheared it off neatly. The blossom flopped down on the top of the ship and slowly toppled off.

The gaping mouth opened and closed spasmodically as it lay pulsing and quivering in the ooze. The bleeding neck shot upright, weaving about as if in search for its lost head.

I had sunk knee-deep into the ooze when the tendril released its hold on the craft and whipped up in search of the new enemy. As it struck blindly to find me, I swung the ax with all my power. This time I aimed the blow

at the base of the vine where it was attached to the tree. It drove through cleanly. The vine floated to the ocean floor, writhing and twitching as had the stem.

I sighed in relief as I made my way toward the vessel's door. The going was slow here in the ooze. Halfway to the bathysphere, I was startled by a distinct rapping noise above me. The sound, like chattering teeth, lasted for little more than a second. I looked upward.

Peering down at me from the foliage above were a score of the most hideous faces I had ever seen!

Even as that frightful noise died away, the creatures who had made it were dropping down upon me. The brutes' heads were gorilla-like in appearance, but with blank, circular fish-eyes set beneath beetling brows. The mouths were lined with long rows of sharp, retractible teeth. The heads were attached to hairy bodies, which ended in fishtails.

In place of lateral fins, the things were equipped with arms and legs that were webbed to the body and in turn ended in web-like fingers and toes. A big, white eyeball was perched on a short antenna growing out of their foreheads. From head to foot, they measured about seven feet.

They were floating down toward me and cutting off my path to the ship. My only hope lay in the fact that these subaquatic tree monsters might be friendly, a possibility that seemed remote, judging from their bestial expressions.

One of the brutes, who was apparently the leader, ground his teeth together rapidly. This seemed to be a signal for the others to attack. I swung my ax in what seemed like a slow-motion dream. The creature at whom I aimed ducked and darted out of the way. Another tackled my legs. Still another came from the rear, clutching desperately to my arm. The leader, rushing in, jerked the ax from my grasp.

WITH a fish-ape grasping me securely beneath the arm on either side, I was whisked away into the dark forest. The rest of the group formed an impenetrable circle about me as we swam. I had time only to cast one fleeting look behind me. The bathysphere had settled in the ooze upon the ocean floor, its powerful searchlight still shining brightly into the forest.

"I wonder how long it will be there?" I thoght in despair. "Theoretically the radium light should continue to burn for thousands of years before the energy is disintegrated."

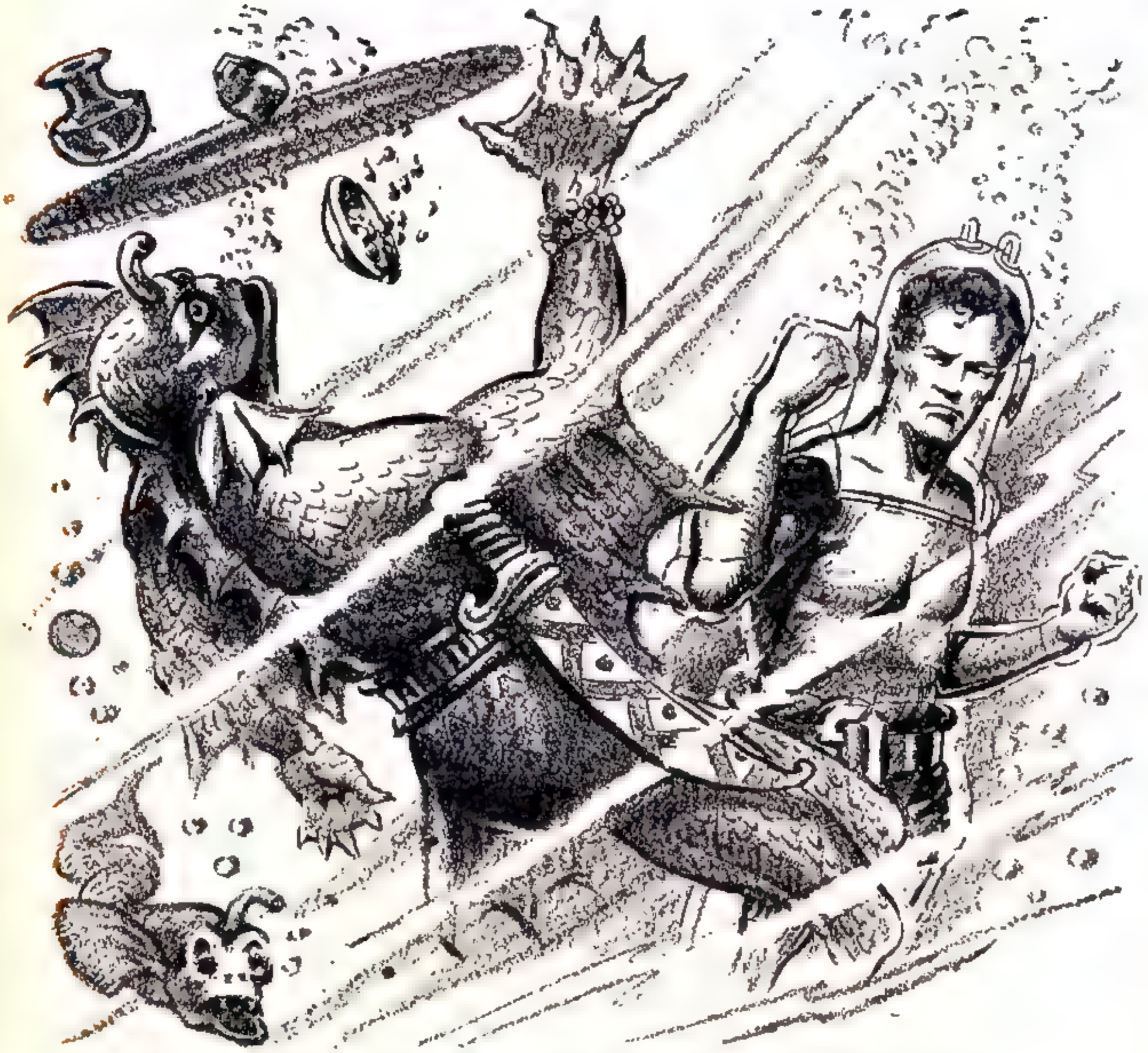
IT was not long before the last faint rays of the searchlight were lost in utter blackness as the alien party moved deeper into the strange aquatic forest. A feeling of horror and hopelessness had settled over me. It was far from relieved by the Stygian gloom that now engulfed me. I thought of my father and Barbara and for their sake I tried to keep up my courage and confidence.

How my captors were able to see in that absolute blackness, I had no idea. They must have sensed in some way the presence of objects about them, for we moved unerringly through the forest. Eventually I became conscious of a subtle light everywhere about us. Before long I could see plainly not only my captors, but I could look down into the dizzy depths below as well.

I guessed that the weird glow, equivalent to the light of a misty day, was produced by phosphorescent microscopic organisms that permeated the water in certain places at these great depths.

Constantly we moved downward and soon came out upon what had apparently been a great clearing in the forest, but now was almost entirely overgrown again. Here, amid the tangled growths of an aquatic forest several miles beneath the water's surface, were the ruins of a once-great city!

During the course of ages, gigantic roots of aquatic kelp trees had woven their slow way in and about the massive granite-block buildings. Oceanic mud and silt deposits, filtering down from above through the centuries, covered arched roofs and circular domes like a mantle of blue-gray



The heavy glass knuckles crashed full upon the Aqualian's jaw (Chap. XVII)

snow in all its powdery beauty.

It was a gorgeous, awe-inspiring spectacle, but not likely to cheer. Like any long-deserted dwelling place of man, there hung over the city that sad impression of eerie loneliness and dark, unfathomable mystery.

My captors swam over a crumbled bridge and entered the city. We moved through debris-filled streets between ancient edifices. Everywhere was evidence that a highly intelligent and advanced people had once inhabited these ruins. The city planning, the architecture and sculptured decorations contributed a silent testimony to their dead masters' talents.

My captors were swimming around in a small circle above a great courtyard surrounded by tall, magnificent old buildings. Here undoubtedly were what had long ago been the palace grounds. I could see creatures moving in the yard below. There were several shark-like forms hovering above the courtyard in the shadows of the buildings that surrounded it.

The two fish-apes that held me on either side quickly nosed over and headed downward. The rest drifted away languidly. Before we reached the ground below, it dawned on me that this courtyard served as a prison. The shark-like creatures hovering above it were meant to prevent escape. Suddenly the fish-apes released their hold and gave me a violent shove downward.

No sooner had I landed in the center of the courtyard than several shapes darted from the shelter of adjacent buildings. As they came toward me, half-swimming, half-running, I noted that they were quite man-like in stature, as had been my captors, yet far lower in development.

There were more living creatures emerging from the doorways about the courtyard. Many were even lower in the scale of evolution, progressing on all fours or swimming by means of short, webbed appendages that were neither true fin nor true limb.

"An interesting study to an ichthyologist," I thought, "provided he had a safe vantage point."

One of the creatures was quite near to me now. It stood fully ten feet at the shoulders. Crouched low, shuffling along, it snarled viciously. Great fangs curved downward almost to the receding chin. Beetling brows overhung two tiny, fierce, fishy eyes. The short antenna waved to and from its low forehead.

The general appearance of the monster was startlingly similar to that of an African baboon. It differed materially only in its gigantic size, the webbed feet and hands, the webbing that ran from its underarm to its side, and its long, fish-like tail. It was chattering dismally, making an uncanny, rasping noise.

The nearest building was about fifty feet away. I spotted one whose ancient hinged door was halfway open. If I could reach that opening, dive inside and get the door closed before the beast was upon me, I might have a chance. I could not move as fast in this watery element as these web-footed beasts of the deep, but I would have a head-start.

I wheeled and fought toward the building as the monster raised its arms and darted toward me. I glided through the water with the slow, painful speed of one moving in a nightmare. As I labored to reach my objective, I realized that the frightful beast was almost upon me.

I took a quick glance over my shoulder. The sharp claws that bristled from its webbed fingers were only inches from the oxygenator tank that was strapped to my back. If those fingers were to clutch that little life-giving tank and rip it from me, I would die a horrible, suffocating death. I was on the point of turning to face my pursuer when I stumbled over a trailing kelp vine and fell on my face in the ooze and matted roots of the ocean floor.

My baboon-like pursuer was on me in a second. The weight of its body crashed against the back of my glass armor. Its fingers attempted to close about my neck.

The area upon which we had fallen suddenly gave way beneath our combined weights. The tangled roots pulled apart as we fell through them.

CHAPTER X

Below the World Below

THE monster and I had broken through the top of what had apparently been a tunnelway. The stone ceiling had long ago caved in at certain places, but kelp roots had grown over the opening and the mud and debris had settled on the roof, disguising the weakened ceiling quite effectively from above. It was only about eight feet wide, but fully twenty feet high.

My assailant still clutched tightly to my neck, but the time it took for us to fall to the floor of the tunnel was adequate for me to make certain I would land on my feet and be partly facing the undersea baboon.

I had little fear that the creature could do any real harm to the amazing glass armor that protected me. My main fear, as I have said before, was that it would in some way damage the oxygenator tank that was strapped to my back. This was the weakest part of my equipment.

The tank itself was fully protected by the Z-glass armor. The two tiny tubes that carried the conditioned oxygen into and carbon dioxide out of my suit, however, arched up from the tank and extended to the top of

my helmet through the washer-protected opening. It was these few inches of tiny Z-glass tubing that I constantly feared would be damaged in some way.

As we landed upon the floor of the ancient tunnel, I twisted around and swung a terrific blow to the monster's chin with my gauntleted fist. The effect on the animal was surprising. While I could not hit as hard underwater as in air, the impact was sufficient to make him release his hold upon my neck and drop like a felled ox.

A second later I had leaped over my fallen foe and set out up the gloomy passageway. I soon found that a mass of stones and debris, fallen from above, had effectually blocked the tunnel in this direction. I turned back. To seek an escape through the top of the tunnel from which I had just fallen would be impossible.

My first gorilla-like captors had probably thrown me into the courtyard, little caring whether I was devoured or not. Why they should have transported me so far from my bathysphere simply for that purpose, I could not say.

Descending farther and farther down the tunnelway, I was surprised to find that it grew no darker. The microscopic phosphorescent organisms had evidently found their way even below the submerged city. By their diffused light, I could see the mystic hierglyphics of an ancient race.

After passing numerous side-tunnels, I eventually reached the junction of five passageways. Then I realized that I had become hopelessly lost.

I could never find my way back. I had to go forward and trust to fate.

Each of the five tunnels was blocked by a massive stone door which swung from an ingenious stone hinge. I tried to open four of these doors in vain. The fifth yielded inward to my strenuous efforts, but I could budge it only far enough to allow my body to squeeze through the tiny opening.

At a great banquet table that was nearly as long as the room itself sat fully two score men and women!

So lifelike was their attitude that for a long minute I held my breath, half-expecting the old man standing at the table's head to turn and question my presence. Even when I had forced myself to move closer, it was difficult to believe that this host and his guests would never move.

The men were clad in leather and metal harness, with great swords swinging at their sides, the women in flowing tunics and gorgeous robes. Neither time nor the grayish light in the ocean's depths could completely fade the riot of beauteous colors in the clothes that graced the bodies of these women from a dead age.

The old man standing at the head of the table, one hand resting upon its edge, was holding aloft a wine goblet. His lips were parted in a faint smile, as if offering a toast. Those nearest him were reaching for their glasses. Some already with goblets in hand were half-risen, all smiling. Others at the table had perhaps not yet heard the feeble voice of the old man above the chatter of the banquet.

There was a young maiden, with lustrous hair high upon her head, smiling gaily at a young warrior beside her. Here was a hollow-cheeked statesman biting into a leg of a mutton. Men and women were eating. Servants, braced against chairs or tables, were passing great platters piled with food. Only one or two people lay upon the floor, probably servants who, walking about the table, were off-balance when sudden death struck.

These bodies upon the flagstone offered a partial solution to the lifelike attitude of the others. Everybody by the table had been braced against it or leaning against their chairs when death struck. The raised arms, the smiles, each body's position perfectly reflected the unmistakable attitude of life itself. No grim jokester could have arranged the bodies thus, however talented he was. Only sudden, breath-taking death could have done it.

Perhaps this ancient city, standing upon an island estuary, suddenly sank to the bottom of the sea. Those people outside were washed away by the

tons of water that engulfed them. But here in this banquet hall at the bottom of the city, the guests were literally crushed to death, not by the swirling waters that raced down the tunnels on each side, but by the tremendous pressure of the air that was suddenly trapped about them.

The air pressure, like an invisible mold, perhaps engulfed them from without and within so quickly that even the bodily cells had no time to collapse into an unrecognizable pulp. The great stone doors of the room could have banged closed immediately, sealing the chamber against the pressure of the water. Through the stone itself, though, water had seeped into the miraculously sealed room in infinitesimal amounts throughout the eons.

The heating effect of the sudden increase of air pressure within the room was probably counteracted immediately by the great pressure of the icy waters that swirled outside the doors. Nevertheless the temperature must have fallen quickly to frigidity in order to preserve in their crypt these lifelike corpses throughout time. What may have prevented oxidation of the metal accoutrements, I do not know, unless it was some compensating chemical in the water at that depth.

TURNING about, I shoved closed the great hinged door through which I had entered. Some power within that room seemed to bid me keep the place forever inviolate. This same feeling forbade my touching the food that had been as perfectly preserved as the bodies, although I was famished with hunger. But when my leg brushed against the jeweled hilt of a great long sword that hung at a young warrior's side, I could not resist the sudden overpowering temptation to acquire it.

It is not possible to describe the immediate surge of confidence this ancient weapon imparted to me as I strapped its diamond-studded belt about my waist. It was as if this young warrior, with a confident, unfrightened smile upon his lips, had been waiting through the centuries to offer his sword to me.

The next room was a kitchen and here I ate. As the cooks, paralyzed over their stoves, watched me, I withdrew a bird similar to a turkey from one of the ovens and proceeded to sample the culinary art of the ancients.

This was the first opportunity I had had to test the efficiency of the double-door principal in the helmet of my diving suit. It worked beautifully. I even got my oxygenator tank to deliver pure water to me at intervals through the regular carbon dioxide outlet tube. The meat was cold and wet, but otherwise it was as fresh as the day it was killed. Even the delicate spicing had not been destroyed.

I was feeling completely refreshed when I closed the far kitchen door and entered another long passageway. To my relief this new tunnel wound upward and I was convinced that in a short while I would be standing upon the ground above. My bathysphere, if I were ever to find it, lay above me. At the time of my capture, my calculations indicated that I must proceed at least four hundred miles farther to reach the point where I figured Megler had gone.

I did not know how far the apes had brought me, but I knew there would still be a great distance to cover. Hazarding this on foot alone in a strange world and element was not encouraging. The prospect of groping my way back in that black forest through which my gorilla-like captors had dragged me was not entirely encouraging, either. Yet I would be helpless without it, for I was not sure now in which direction lay my destination.

Presently I came to another door. This yielded quite readily to my weight and I found myself standing in a spherical chamber. Suspended from the walls and domed ceiling were row upon row of round, jelly-like balls, varying from the size of a golf ball to about three feet in diameter. The soft shells were all more or less transparent and I could see the contents of each quite plainly.

Some of the smaller ones were fastened to the wall quite close to me and in these I could see only an indistinct dark mass. But as the spheres grew

larger, their contents took on form. The unmistakable truth dawned upon me that inside each of those glutinous balls was a living embryo and the eggs grew in size as that embryo developed. Here were the eggs of the oviparous gorilla-like creatures who had just captured me.

Instead of hatching, the little fish-apes continued to grow within their eggs. They reached maturity in full development and still were folded in their jelly-like shells. At this stage they were identical to the full-grown creatures who had captured me.

A SHRIVELED, hairy arm was protruding from one of the larger eggs, feebly waved a wrinkled webbed hand at me. While I watched, its head popped out of the gelatinous egg-shell and the watery eye of the creature came to rest upon me. It smiled vacuously and gurgled, the smile and gurgle of a newborn infant. Then it struggled spasmodically, tumbling out of its egg and rolling down toward the center of the concave floor.

The egg had hatched!

The body came to rest in the center of the floor upon a circular metal shield. Here the flailing arms of the sobbing infant or ancient banged against the shield, which gave forth loud clangs that echoed and reechoed frightfully in this spherical hatchery.

This must have served as a signal. The opposite door immediately opened and a couple of female attendants entered the room. They were slighter in build than the males who had captured me, but they had the same hairy bodies with the fish-like tails, the same bestial faces, fishy eyes and sharp, retractible teeth.

They proceeded directly to the newly hatched individual. His arms were grasped by one attendant and his feet by the other. He was hauled, squalling, toward the door through which the two had just entered.

They had already reached the door before one of them turned and stared directly at me. They began snarling and chattering at me. Then one of them disappeared through the door, dragging along the newborn thing by one leg. It seemed but a moment before she returned with half a dozen huge males, who burst past the one at the door and rushed into the room. They headed straight toward me.

I had drawn my sword. The first who came within reach found my blade shoved into his chest, halfway to the hilt. The monster went down and nearly pulled the weapon from my grasp before I could get it free. I split the next one's skull and then made a dash for the door, slashing to right and left as fast as I could.

The females at the door wisely jumped aside and let me through. I wheeled immediately, shoving the heavy stone door closed.

CHAPTER XI

An Unexpected Friend

ANOTHER long corridor with numerous side-tunnels stretched out ahead of me. I commenced to run. The excitement of the previous encounter had started me breathing quite hard. The hot breath on the inside of the diving helmet soon caused a condensation of moisture. It was difficult to see clearly, so I turned into a side-tunnel to adjust the little humidifier that was attached to the oxygenator tank.

I had sheathed my sword while making the necessary adjustments and was waiting for the glass to clear up when something smashed against me from behind and hurled me to the floor. Many heavy bodies sprawled down upon me. My hands were jerked behind me and tied. I felt myself losing consciousness. Faintly I recall being jerked to my feet and dragged a long way through many more winding, narrow tunnels. Then there is a complete blank.

My next memory is rolling about on the slimy floor, convinced that I was suffocating. Slowly, painfully I reached around to the outlet valve on my oxygenator tank. It had been forced closed, probably in the scuffle when I was recaptured.

I was being asphyxiated with an

overdose of poisonous carbon dioxide that I had been exhaling into the interior of my helmet. Ordinarily the tube carried the carbon dioxide back into the oxygenator tank, where it was absorbed by a soda lime mesh. But that valve had effectually closed the normal path of escape for the gas.

Somehow I managed to stay conscious long enough to turn the valve. It was hard to manage it with my bound hands, but at last it opened. Again I went out like a light.

When I came to, there was a dull ache at the base of my neck, but otherwise I felt no injury. Lying on my side, facing a stone wall, I had little clue as to my whereabouts, except that I was still underwater. I was about to turn over when I heard my name called!

At first I thought it was a delusion of the brain returning to consciousness. Then again it sounded sharp and clear, yet with a strange, echoing ring.

"Norris! Norris!"

I rolled over and staggered to my feet, backing against a stone wall. I was in a small cell, one end of which was barred. Seated against the opposite wall, looking up at me, was a fish-like man!

He was about my size and wore armor much like that of the Egyptians of old. No sandals covered his feet, though, and his toes and fingers were webbed like the fish-apes'. A thin skin webbing also went from elbow to side. The head was quite human, but there were certain piscatory characteristics about the features that were unmistakable.

The eyes were round, blank and unblinking, the mouth protruding, the lips constantly opening and closing. The nose was human, although the nostrils were plainly exposed. He had no ears, merely a hole on each side of the head. Above the eyes in the center of the forehead protruded a short antenna, ending in what appeared to be a round, white eyeball. On each side of the neck were gills, brilliant red in color, that opened and closed with each breath.

Scales apparently covered his entire body.

THESE general characteristics I noted at a glance as I stood there staring at him, amazed that my name could have been uttered from those ichthyic lips. Now the ocean man spoke again with his strange voice, smiling at me in a friendly manner.

"I am glad you are all right. I was beginning to get worried. You have been unconscious for some time."

If your favorite goldfish, swimming about within its little bowl in your parlor, would float to the surface and inquire about your health one day as you watched him—well, you would be less surprised than I was then. You would at least have been acquainted with your own goldfish.

I must have looked silly standing there, gaping at him, more like a fish than he. Presently he spoke again, calling me by name and asking if I did not recognize him.

"Who are you?" I finally mumbled. "How do you know my name?"

"You must speak louder and more distinctly," he replied, standing up and moving closer. "It is difficult to get the sound vibrations through that helmet of yours."

I repeated my question, this time yelling it.

"Not so loud!" He smiled, parting his strange, sucking lips and revealing clear white teeth. "You will have the guards swimming in here to beat you for disturbing their court sessions." He stood in front of me, scrutinizing my face carefully. "Amazing. Positively amazing."

"What's amazing?"

"The remarkable manner in which the Extract has caused your glands to function. Why, it seems but a short while since you were an old man!"

"Sometimes I feel very old, but I didn't know it showed on my face."

He placed his hands on my shoulders and mused half to himself.

"Could it be that the memory also is affected by the Extract? It is quite obvious that you do not remember me."

"I haven't the faintest recollection of ever having seen you or anybody like you in all my life," I said. "How in Earth's blue waters did you know my name?"

"We met soon after you arrived in Aqualia," he explained, as if I should have known. "We had many long conversations together before I was exiled. Since I did you and your friends several favors, I thought you'd never forget me, Professor."

"Professor?" I cried. "You mean Professor Norris! He's my father. Have you seen him? Is he well?"

Surprise was written clearly on his face.

"Yes," he said slowly. "I knew your father and he was well, but I doubt if you would know him now."

"Barbara Lawrence!" I managed to blurt. "What do you know about her?"

"I have seen her," the stranger replied. Then he hesitated. "Here, let me take the bonds off your wrists."

My arms were pretty stiff, tied behind me as they were, and it was a relief to get them free again.

"The apes will be here for us soon," he said a little sadly. "But I will tell you now of your father and your friends, for I shall probably have no other chance. You came in search for them, I imagine, and to learn the fate of the thousands of others who disappeared from the surface above."

I TOLD him briefly what I knew and the object of my search, taking him completely into my confidence. Something in his manner inspired confidence. I also gained the impression from his attitude that what we told each other would soon no longer matter.

"I am Vodak, Thirty," he began. "My father was Vodak, Twenty-nine. He, like all the kin of Vodak, was ruler of the great kingdom and city of Aqualia. Our nation had many scientists. Under the leadership of my father, they were intent upon bettering conditions in our kingdom and adding to the culture of our great race.

"We had for some time been intercepting your radio broadcosts. After much study, several of our greatest linguists deciphered your English language. For cultural purposes, English became a requisite study in our educational system, because from your broadcasts we learned many helpful facts that we could apply to our own environment.

"Aqualia was a happy nation until a few years ago. Then my father was assassinated by a power-mad scientist named Ola. This man had gained control over an ignorant and uncultured minority of the Aqualian's by promising eternal life to all who would follow him. He actually did have a scheme for gaining longevity.

"Thus he had no trouble gaining supporters, especially because of the fact that a seaman's life-span is quite short. Any chance of lengthening it looks good to Ola's followers. Ola's scheme materialized. Rumor has it that he miraculously established contact with the upper world. Shortly afterward an upper world man actually came down to Aqualia. His name was Fritz Megler.

"It was not long before Ola and Megler had accomplished the seeming impossible rejuvenation. When news of this spread through Aqualia, thousands of people flocked to Olas' support. But there were many of us who were strongly opposed to this wild scheme of eternal life. Particularly we wanted no contact with the upper world.

"From what we had learned about Terrestrial civilization through intercepting your radio waves, we feared that if contact were ever established, Aqualia would be exploited and made subject to some upper world dictator. After my father, the king, was assassinated, Ola started a bloody purge of all those who openly opposed his scheme.

"My followers and I were forced into exile. It was not more than twenty hours ago that Ola's men captured me and brought me here to the kelp-apes. Your future and mine look very black, for the kelp-apes will feed upon us."

Suddenly, from far off, came a horrible, chattering shriek.

"They are getting ready for the trial," Vodak said. "It won't be long now."

"Vodak!" I cried. "My father and the others—what has happened to them? What had Father to do with

Megler's rejuvenation? Why was he brought beneath the sea?"

"Megler and Ola needed your father's great mind."

Vodak was standing by the bars of our cell, looking up the hall. I went over to him.

"But my father could not be guilty of wrongdoing."

Vodak looked at me closely for a long moment.

"Usually such men as your father have good reasons for their actions, Norris."

I had no time to learn more about my father or the others from Vodak. Two kelp-apes had come for us. They unlocked the rusty padlock with a huge key and motioned us to accompany them. They were enormous specimens. One of them wore my sword and belt strapped about his waist.

WE moved up through a labyrinth of tunnels until finally we entered a vast, high-domed room. It was filled to capacity with kelp-apes, who were squatting on stone benches. At the end of one long aisle, seated in a great throne upon a raised platform, was the youngest and smallest ape I had yet seen. He was entirely naked, except for the jewels that he wore about his neck, wrists and ankles. The gorgeous stones and shells of many colors were strung upon strands of tough seaweed.

His tiny body was so bedecked with jewels that the sight was ludicrous, especially since the throne had been built by the ancients to seat a man fully three times the size of this little creature. The throne was guarded on either side by a pair of huge, speckled sharks that floated just above the floor of the platform, facing the audience. They remained absolutely motionless as we were escorted down the long aisle. From snout to tail they were fully twenty feet long.

Our guard halted us in front of their chief. The ape with my sword commenced to give an account of our presence with a steady chatter of his teeth, forming the resulting sound into monosyllabic words with his lips. The little ape upon the throne was listening far more intently than one would expect from a baby kelp-ape.

When our guard concluded what had evidently been a resumé of how each of us was captured, the little chief began to speak. It was the longest harangue in any strange or familiar language that I had ever heard. He started in quite excitedly, his words were coming quickly. After awhile I noticed he would form a few words with his lips. Only the steady, monotonous chatter continued unabated, coming through his teeth.

Vodak finally turned to me.

"I know a smattering of their simple language and how they love to chatter," he said. "But I have never heard one of them speak so long about so little."

"What is he saying?" I asked.

"He is saying practically nothing now. At first he was telling the court just how death would be meted out to us."

"How?"

"We shall be fed to the royal sharks."

CHAPTER XII

Amazing Escape

AT the end of another hour, I noticed that every ape in the court audience was sound asleep. Our two guards were dozing on their feet beside us. Even the sharks seemed unconscious, for their massive bellies now rested down on the floor platform. Now the king himself was commencing to doze. With his own monotonous chatter he had begun to lull himself into hypnosis.

"How long will this continue?" I asked.

"I have heard of some of their old kings chattering for forty-eight hours without a pause. This chatter continues even while they sleep on their throne. The apes have a child-like worship of anyone who can make a noise for so long."

"It must be akin to music appreciation," I offered.

"This king is quite strong for an old ape. He will probably continue for many more hours."

"Why do you call him an old ape?" I asked. "He is the youngest I have seen."

"On the contrary," said Vodak, "this ape must be very old. He is not much bigger than the egg in which he started as an embryo."

That was a puzzling statement, but there was no time to question him further. I had been watching the king closely and his eyes had not opened for some time. As far as I knew, everyone in sight was asleep.

Motioning Vodak to silence, I pointed out the window, indicating that he and I should attempt to escape. The courtroom was on ground-level and the kelp forest loomed invitingly outside. He tapped me on the shoulder, pointing to the swords around the ape's waist and then to one of the sleeping sharks.

I didn't catch his meaning at first. He put his lips close to the sound receiver on my helmet.

"If you will crash your fist down on top of that ape's head, I will show you a much surer way of getting out of here than on foot."

I still did not know what he meant to do, but I trusted Vodak. My mailed fist descended upon the cranium of the ape guard. Vodak lowered the unconscious body quietly to the floor.

We looked around. No one had so much as moved an eyelid, not even the other guard who stood beside him. I unbuckled the sword-belt from the ape's wrist and strapped it about myself. When I had drawn the blade from its scabbard, Vodak indicated that I should give it to him.

I followed him to the steps of the platform. The king had not once ceased his chatter, but no words were being formed by his lips and his eyes were shut tight. Yodak proceeded directly to the side of the giant shark upon the throne's left. The great body was absolutely motionless, except for its breathing. Though the eyes were open, I knew it must be asleep, for it naturally had no lids.

"At my signal, we must both leap astride the shark's back," Vodak whispered. "Hold tightly behind the dorsal fin, but don't touch the fin, no matter what happens."

We both crouched low. At Vodak's command I leaped for the brute's back, swimming and clawing my way up its side as fast as I could. Reaching a spot behind the dorsal fin, I straddled the back and clung for all I was worth to a fold of the loose skin. Vodak sat in front of the fin, clinging only with his knees. The creature had awakened the instant we reached our positions, but we were firmly seated on its back before understanding dawned upon the dull mind.

I COULD feel a mighty tremor race through the mighty muscles of the giant back. The fin behind which I clung suddenly whipped to right and left. If I had been holding to it. I should have been catapulted through the water to a crushing death against the wall fifty feet away.

Vodak smacked my sword with all his might against the creature's right side. Like a bolt out of Hades, the shark flashed to the left. Then, except for the balancing lateral fins, it became motionless once again.

The smack of that sword against the sleek hide brought every ape in the courtroom to his feet. The tiny king was the first to spy us. His shrieking, c h a t t e r i n g command brought the whole horde darting toward us. From each mouth screamed the shrill fighting cry. The combined noise of all their teeth grinding together produced as horrible a bedlam as I ever hope to hear.

Turning partly around, Vodak smacked the sword squarely across the creature's back. I saw only a blur inside that room as we streaked for the window opening. The next second we were outside the building and were swallowed up in the shadows of the kelp forest.

Our amazing mount swam unerringly between the holes of the arboreal giants, slipping through the hanging creepers and dodging the sucking vines that threatened us on every side. I could see that Vodak was con-

stantly easing the monster toward the left.

Before long we shot out of the forest with breath-taking suddenness, out over the rim of a great circular abyss. As we began to follow the rim of the abyss, Vodak turned around and smiled at me for the first time.

"Not for years has anyone escaped from the kelp-apes," he shouted.

"How did you know that you could control this wild shark?"

Vodak chuckled. "If you can glance down without tumbling off, you will see in the dazark's left side a circular scar. It is the width of a man's hand, with a dot in the center of the circle."

I leaned over to the left and saw the bewildering mark.

"That is a brand," he continued, "used by the Aqualian mounted police. This shark evidently swam away from Aqualia, or was stolen by the kelp-apes. I noted the brand while we were standing in court and knew the dazark would obey my command. The beasts are trained well by the police. I was a member of the organization for some time and learned how to manage them. Dazarks are short-tempered, however, and not so tractible as logars. You will see our other mounts in Aqualia."

"What are your plans?" I asked. "You said that you were in exile from Aqualia. Do you dare enter the city?"

"I have many friends and followers in Aqualia. If I wished, I could enter the city at any time in disguise. At present my family is living in seclusion on the city's outskirts. We shall go there first and make our plans for the future. Without your help, I should probably never have escaped. Let us be friends."

"The chances are that I'd be inside the belly of this shark or the other, had it not been for you."

VODAK told me that it would be hazardous to search for my bathysphere in the kelp forest. The sharks' eyes were not too well equipped for seeing in blackness, but that area of the black forest was overrun with kelp-apes and many other dangerous forms of fish and plants that could readily snatch us from our mount's back.

Our dazark was following the chasm's edge, swimming along at fifty miles an hour, which Vodak told me was a normal rate of speed for these creatures. It is difficult to describe the sensation one gets in riding on a shark's back. Its body moves in a rapid succession of undulating waves, each ending in a whip of the great tail that sends the creature speeding through the water. Hanging onto the slippery tail and thinking of those murderous teeth is another thrill, though considerably less pleasant than the speed. Several times the rush of water almost pushed me off over the chasm.

Finally I saw below us what appeared to be mountains composed of separate chunks of solid rock, geometrical in form. Some of them must have been the size of boxcars and of similar shape. Most of the mountain-high stacks were piled evenly, although some were apparently formed by a haphazard arrangement of the individual sections of rock.

Faintly I could see several of these giant slabs of solid rock actually being moved toward those heaps. The means of conveyance was a little blurry at that distance. When I questioned Vodak, he explained that the slabs are placed upon flat-wheeled cars and pulled along tracks by teams of draft-fish or logars.

Looking ahead now, I was startled to see two huge, metal pipes that rose vertically two thousand feet from the chasm's bottom. Out of their mouths poured great quantities of mud and ooze, which formed a solid black cloud in the sea above us. Why it did not descend again was peculiar, but Vodak told me that the currents above carried it away quite rapidly.

My eyes followed those two silent sentinels down toward the ground below. Here they made a right-angle turn and disappeared into a cliff, through the mouth of a tunnel opening fully five hundred feet wide.

"Hold tight!" Vodak suddenly yelled back at me. "We're going down there!"

He reached forward and tapped the shark on the top of the head. The creature nosed over. With my stomach in my throat, we shot down at breath-taking rate toward the ground a thousand feet below. In that thousand feet the pressure should have increased tremendously. Other than the frightening knowledge of the awful weight upon me, though, I felt no difference in pressure, encased as I

veyance from a large garage adjoining the station house.

The car was bullet-shaped and sealed, just big enough to seat two people inside. The windows were polarized glass through which one could see without being seen. Running on a single rail of the double track leading into the tunnel, the car was balanced by a gyro-stabilizer.

Vodak controlled it by speaking

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was in that ingenious glass diving suit of my father's invention.

VODAK was well acquainted with the man in charge of the workers' trolley cars, who was secretly pledged to my strange friend's cause. Vodak had made sure there was no one else about the station house before he descended in the rear of it.

The station master's name was introduced to me as Saulo. Vodak told me that he was an old man, but he seemed more like a lad to me. Saulo tied up our shark in an enclosure in back and brought out a neat little con-

short, crisp commands into a mouthpiece. He told me that the means of locomotion was a tiny motor operated by power derived from alternately relieving the water-pressure on certain radioactive substances.

Saulo furnished us with a forged pass, which described us as job foremen. We simply attached this to the windshield. It got us by the gate with no trouble, although Vodak stated that there was usually a lot of red tape before visitors could enter.

As soon as we were inside the mouth of the huge tunnel, Vodak called my attention to the powerhouse just out-

side the tunnel as we went by. The Aqualians had electricity, though the conductors were insulated differently. The principle is identical, utilizing the flow of charged electrons through a wire.

There was a maze of metal tracks within the tunnel, having many sidetracks and turnoffs. We passed workmen who were coming out into the open, dragging cars with small loads of rock. We also passed several outgoing loads of the great slabs that I had seen being piled outside. The rocks looked hard as marble and were cut evenly.

Huge docile-looking fish, sometimes ten in a team, pulled the larger loads. Some of the lighter slabs were pulled along on flatcars by logars, mighty two-legged monsters resembling prehistoric Tyrannosauri.

The tunnel was elaborately braced against the water pressure of these depths. Gigantic metal beams and trusses, buttresses of huge rock everywhere supported the ceiling and walls of this metal tube that entered the Earth.

Vodak got on a single track. Noting at all-clear light, he spoke the Aqualian word for "ten" into the mouthpiece. The little car shot ahead, but with such a delicately controlled acceleration that there was absolutely no jerk. The walls of the tunnel and the passing cars went by so fast that presently they were only a blur. Vodak told me that we were traveling deep into the Earth at the rate of a thousand miles an hour!

CHAPTER XIII

Danger!

IN less than an hour Vodak brought our car to a standstill. We were on the wide rim of a cylindrical metal shaft, about a half-mile in diameter and extending down into blackness below. The hollow shaft continued upward for another thousand feet, where could be seen the smooth end of a metal piston that exactly fitted the cylinder.

Elevators were constantly rising from the shaft below and dumping enormous rock slabs into waiting cars or upon belt conveyors. The dirt and smaller rock was dumped into the open mouth of the two huge pipes that I had seen rising outside of the mouth of the tunnel. Vast water-blowers forced the dirt out of the pipes, forming the black cloud I had noted above.

"You are visibly amazed," Vodak said, turning to me. "I wonder if the full import of this project has occurred to you yet."

"The light is taking some time to dawn upon me," I admitted. "Full realization of a project so overwhelming does not come quickly. When the end is in doubt, the means are all the more difficult to understand."

"You have seen a great deal already, more than some Aqualians ever see. If we are to help each other, as I think we can, you must know more. That is why I brought you in here. I shall tell you the facts briefly. Much of it you will perhaps not understand. When I am through, you will probably feel great anger at my people, but they are not entirely to blame.

"We Aqualians have done a great deal of undersea mining. Our methods naturally are far advanced beyond yours. When Ola's plans called for the capture of a populous portion of an American coastal city, he actually began undermining it. First he located a city—Oakland—by radio triangulation, with Fritz Megler's help.

"After digging a horizontal tunnel to a spot beneath the city, Ola's engineers then excavated a cylindrical section of earth about a half-mile wide, extending almost all the way up to your city. As the excavation progressed, the walls of this massive cylinder were lined with metal.

"When the job was completed, it was a gigantic hydraulic piston, at the top of which was your doomed City of Oakland. That piston was tight enough to prevent equalization of surface and bottom pressures. When all was in readiness, a valve was turned. This massive column of solid rock was hydraulically lowered into a correspondingly deep casing-lined pit.

"The pit had been excavated beneath the level at which the seamen have their main horizontal tunnel. When the city had dropped some four miles downward to the level of this horizontal tunnel, the people thus captured found themselves completely encased within the great compression tank that protected them from ocean pressure.

"They were thus living at the bottom of the sea, within a world of their own, protected from the water outside and supplied with fresh air and food by special tubes from without. Ola had been forced to this gigantic engineering feat because it was the only way he could solve the problems arising from the difference between ocean and atmospheric pressure.

"We ocean men ourselves cannot go to the surface. Hence Ola had to bring the Terrestrial humans down to him. He has kept the surface men alive at suboceanic depths by means of this gigantic compression chamber, which encircled the section of lowered city as soon as it had reached the bottom of its descent. Once encased in this protecting chamber, the surface humans were safe. The sea was allowed to refill the gaping hole resulting from the lowering of the city.

"But the time required for these tremendous engineering masterpieces, although highly successful, is far too long. Ola and the people want quicker action. This job, which we call Project Number Two, will probably be the last of this type. I understand that Megler, with your father's help, has devised a method whereby the undersea men can come to the surface in great numbers and actually capture all the Terrestrials they need."

I HAD been listening to Vodak carefully. Here at last was the explanation of the great Oakland catastrophe and here before us was the second project of the Aqualians. This one, I knew for a certainty, would strike at the very heart of San Francisco!

The tragedy of Oakland would be multiplied ten times. Vodak said that, in addition to lowering the city, the seamen themselves would spew out of the water and overrun the city. I could not believe that Dad would knowingly degrade his scientific knowledge to aid Fritz Megler in such a horrible plot.

"But why?" I cried. "What's the purpose of lowering cities and capturing people from the surface?"

Vodak was silent for a long while.

"Megler promised the undersea men eternal life," he finally replied. "Many of my poor people believed, but I know better and so does your father. The path of evolution cannot be so quickly smoothed. What now may seem the dream of eternal life will carry my people and yours, too, into a nightmare of tragedy."

Eternal life! What connection had Fritz Megler's youth serum with the Aqualian dream of immortality?

During Vodak's explanation, my mental agony had made me oblivious to our surroundings. Workmen had continued to pass us. To them and all other signs of the immediate locale, I was unconscious until suddenly a loud banging on the door of our little car brought me to my senses. Vodak, too, was startled. Again came the knocking. This time Vodak answered, calling out in Aqualian. A gruff voice replied from the outside.

"It's the tunnel guards!" whispered Vodak to me. "They want us to open up!"

We could see a couple of them standing outside, although they could not see us through the polarized glass.

"This is bad," Vodak breathed. "The pass that we had on our watershield must have fallen off in the tunnel."

Vodak seized the control mouthpiece and held it ready. Evidently he knew what was coming. There was more shouting and knocking.

"They are telling us to open up or they will break the door in."

Some of the nearby workmen, seeing that trouble was up, had abandoned their trucks and were approaching.

"Get ready," whispered Vodak. "We'll have to make a dash for it!"

One of the guards was swinging back a huge ax when Vodak spoke one word into the mouthpiece. Our little car suddenly revolved to the right in

a half-turn. The guards barely had time to leap out of the way. Another short command and we were speeding back through the tunnel at a thousand miles an hour.

"That was a close one," sighed Vodak. "It would never have done to let them know yet that I had returned. While many of them are my followers, word would leak out to Ola and our whole future plans might be spoiled."

"Won't they follow us?" I asked.

"Yes, so we must work fast when we get out of the tunnel."

Quickly we reached the great metal gate. Instead of sliding aside, which Vodak told me was the rule when vehicles left the tunnel, the gate remained shut. As we came to a standstill, the gate captain appeared with a squad of men, armed with wicked-looking rifles of a strange design.

"I might have known the tunnel guards at the other end would radiophone a warning to the gate captain!" Vodak said despairingly.

WE were trapped inside the tunnel, unarmed except for my long sword, which Vodak still retained!

Vodak's life was worthless if he were recaptured by Ola's men. Fortunately I had not yet had enough experience with Aqualians to visualize my particular fate. But with Fritz Megler in Ola's good graces, I knew my reception would be hot rather than warm.

The captain was a tall, well built man. He wore ornate trappings of gold. A jeweled sword and a revolver hung at his side. He was evidently a brave man or a fool. He halted his squad some fifteen yards back and continued to walk toward us, never once hesitating, although he could not have had any idea who was inside our car.

Vodak apparently recognized him as he moved closer. When the captain rapped on our car window, my alien friend leaned over and whispered his own name through the tiny ventilator in the door. The captain's face lighted for an instant in surprise. Then he smiled slightly and motioned us on, at the same time signaling the control house to open the gate.

"The captain," said Vodak as we were speeding through the gateway, "is another loyal subject. It helps to have followers planted in key positions."

Presently we were at the station house, where we recovered our shark from Saulo and were soon on our way toward Aqualia.

The smooth, sheer cliff that I had noticed farther up the canyon now gave way to a much more interesting geological formation. Minarets and domes, peaks and mounds rose from the floor of the valley, while the sides were eroded with countless vertical gulleys and huge, gaping caves. Much of it reminded me of the Grand Canyon.

Vodak said that a great deal of the formation was due to undersea currents. Racing down the deep through the ages, they carried off microscopic bits of the softer particles of rocks.

"This canyon in which Aqualia is located," he went on, "is what your geologists call a foredeep. It appears to have been an area that was originally depressed by breaking, or sharp bending of the ocean floor, to compensate for the uplifted marginal mountains on your Pacific Coast."

"As far as I know," I said, "this particular foredeep has never been discovered by oceanic soundings."

"The bottom of the sea is a huge expanse," he answered. "Our canyon occupies but a tiny crack in its surface."

WE had just rounded an abrupt turn in the canyon when we came in sight of another pair of huge pipes rising out of the mouth of another giant tunnel. We saw the same mountains of geometrically cut rock, the car tracks leading out of the tunnel to the rock pile. Everything was identical to the tunnel we had just visited, except that there were no signs of work here.

A great concourse of people was gathered at the outside of the tunnel. Although we were quite high above them, I could see that they appeared to be merely waiting.

"This is the entrance to the tunnel of Project Number One," Vodak said.

"At the tunnel's end lies the circular section of Oakland that was lowered into the Earth. There also are held captive a great number of your fellow surface men. The crowds you see at the gate are waiting their turn for injections of the youth serum."

Vodak suddenly brought our mount to a halt in mid-water. He pointed into the distance.

"And there," he cried, "lies the City of Aqualia!"

The metropolis must have been five miles away, yet it showed quite plainly through the clear, cold depth. Never have I seen such a gorgeous sight. Words are inadequate to describe the splendor of that vision. We were looking over a rolling valley completely carpeted with beautiful subaquatic flowers. Ancient gnarled trees of weird shape were grouped in clumps that dotted the seascape to the distant peaks that formed the farther walls of the giant canyon.

The city stood upon a high plateau in the center of the valley. Take the varied hues inside the shell of a chambered nautilus, multiply them a thousand times, dividing each color into dozens of subhues. Then view the result through the subtle, gray veil of an early misty morning and you may have some idea of the dancing colors in the underwater city of Aqualia.

As we moved toward it, the fantastic architecture became clearer. It seemed to leap out of the fairy stories of childhood. Great, circular stairways wound snake-like up to arched doorways in golden turrets. Columns a hundred feet high supported sparkling domes and shimmering minarets that were joined together by flying buttresses of polished silver.

As if they had feared the city might appear too new, countless trillions of tiny marine creatures had left their mortal shells in billowing clumps over the ancient buildings. Worried lest the taller structures might grow too high, the little coral shells had pounced upon their tops to hold them down. The result looked like huge, appealing ice cream cones.

Dotting the valley floor about the city were the small stone abodes of the Aqualian farmers. Nor was I too far away to see the tiny spots moving about the ground, or swimming through the water. Farmers worked in their fields, using huge, grotesque-looking fish that were hitched to plows and wagons.

Far to the right, down from the cliffs above, a party of hunters was descending, astride the backs of dazarks. Now a school of a thousand white fish cruised by to our left and swam leisurely out over the valley. They were perfectly round, with tiny tails and fins. They had no eyes that I could see, only little antennae in the front, much like that which grew out of Vodak's forehead.

While I had been watching, enraptured, the view that spread out below, Vodak had let our mount drift slowly down through the water. We were now directly over a sponge-like tree that grew upon a hilltop. A second later we had eased down through the soft foliage and settled upon the ground.

CHAPTER XIV

Return of an Exile

AFTER we dismounted from the shark, Vodak tethered it to the tree with a short piece of tough grass running to the shark's fins.

"We will be seeing too many people from now on," he explained, "to risk detection. We'll have to wait until dark before proceeding to my house, which is located in the suburbs of Aqualia. I am supposed to be dead by now and it would not do to have Ola learn otherwise. We must wait until night before going down."

"Night?" I exclaimed. "How can there be night and day at the bottom of the ocean, where sunlight never penetrated?"

"We have our night and we have our day," Vodak said patiently, "and the length of each corresponds almost exactly to yours. The tiny phosphorescent creatures whose aggregate light illuminates our world must rest periodically, or their phosphorescence would be dissipated in a short while.

Our scientists have discovered that as your darkness envelops the world above, these little organisms somehow become aware of it.

"Perhaps some of the shorter rays of the sun's light even penetrate down here. We are not certain of that yet. Nevertheless the phosphorescence of the animalcules fades to darkness as dusk creeps into night in your world above."

When Vodak spoke of darkness in this submarine world, he was guilty of a gross understatement. As he predicted, the phosphorescent glow soon began to wane. While we sat within our shelter, peering out over the valley below, absolute blackness—not mere darkness—eventually engulfed us.

Believing that we would remain here until morning, I lay down to get some much-needed rest. It seemed that I had no sooner closed my eyes before Vodak shook my shoulder gently.

"We had better be leaving now," he said. "You've had a good rest and I can see very few people awake in the valley."

"I can't see anyone or anything," I grunted, sitting up. "In fact, I'm not even sure my eyes are open."

"There will always be insomniacs roaming around," he remarked. I could hear him rise to his feet and untether our shark. "We may as well take a chance on getting there now."

"But how can we get to your house when we can't see anything?" I asked. "Or is there something wrong with me?"

Vodak laughed softly. "Your eyes are all right. I can't see anything, either, in the usual way."

"But you said that you could see out over the valley. What did you mean?"

"I do see, in a way," he explained, "with the 'eye' on the antenna that grows out of my forehead. There was a long period in our evolutionary development, before the advent of the luminous organisms, when we undersea creatures had absolutely no light to guide us in our constant fight for existence. We developed a certain sense that you surface men perhaps once had slightly in your early development.

"Within the brain is a small vestigial organ that you call the pineal body. Your scientists never knew its function definitely. With us it is well developed, protruding from our forehead on this tentacle-like antenna. It is extremely sensitive to gravity, the mutual attractive force that exists between every object in the Universe. We see, even in utter blackness, by a gravitational sense. It is quite accurate."

"But you also have eyes like mine," I objected.

"They are rudimentary. We cannot see with those at all any more."

HE boosted me up on the shark's back. Presently I could feel the rush of water past my diving suit as we raced toward Aqualia. This traveling in utter blackness gave me the same weird sensation that I had experienced before, when the kelp-apes had raced me through that dense aquatic forest.

Several times in our journey across the valley, Vodak drew our dazark to a halt. He explained that he was waiting for some party of late merry-makers to pass on their way home from the city's night life.

I asked Vodak why, if the presence of light and dark meant so little to them, they bothered to observe any set periods of time. He replied that all Aqualians needed about eight hours' rest. They had carried over the practice of sleeping at that time from the period before the gravitational vision became developed, just as we do, though we can banish darkness.

When Vodak told me that we were above the city, I knew we were proceeding more cautiously in order to avoid the night police and Ola's spies. Vodak confirmed this.

It became dawn. As we swam in among the trees to Vodak's house on the city's outskirts, I knew he was eager to see his little family. But when we stepped inside, he drew back in horror.

Drawers of tables, bureaus and cabinets had been rifled. The lining had

been pulled out of the sofas and the mattresses in the bedrooms were ripped apart. The little house had been completely ransacked.

"Ola's agents have been here!"

I could see the muscles on Vodak's jaw work spasmodically in the heat of his anger. I feared that at any moment we would find his wife and child murdered, but Vodak had evidently rehearsed his mate well for just such an eventuality. He pulled aside a carpet and opened a trap-door in the floor. He called down softly.

An Aqualian woman climbed out and fell into his arms, sobbing. Vodak went below and brought up their child. It was a touching scene, for his wife had evidently given up hope for him, after he had been arrested by Ola's troopers.

I stayed with Vodak for nearly a month before we entered the city. In return for helping him get his house in order again, he and his wife took turns teaching me the Aqualian language.

It was not difficult, learning to understand it, but some of the sounds in speaking I could ever quite master. They originated from the forced passage of water through the vocal membranes. The resulting subtle, liquid accents were almost impossible for me to duplicate exactly with my human method of speech.

Many of the c o n s o n a n t s were clipped off by a sharp grind of the back molars. I could not mimic those sounds forcefully or convincingly. Nevertheless I learned to speak passably and could u n d e r s t a n d the strange language quite well, for my heart was in the learning. If there were to be any hope of saving my father, Barbara Lawrence and the others, I must be fully prepared to meet my opponents on an equal footing.

I HAD ample opportunity to practice the tongue. Vodak had many visitors, who came in the night and talked of the old days under the Vodak regime, cursed at the cruelties and hardships of the tyrant and plotted the revolution that was to come.

They were mere voices out of the depths, whispering in Vodak's cellar, for I could never see them in the pitch-blackness of the submarine night. Many of them were high in government stations. Others had key positions in factories and arsenals. Old Saulo came often, as did the captain of the gate at the tunnel of Project No. Two beneath San Francisco.

They distrusted me at first, but Vodak's trust eventually won me their confidence. Each one, however, mistook me for my father. It happened so often that I almost grew used to it, though Dad had been nearly eighty when last I saw him!

Vodak handled his men like one long accustomed to leadership. There was no doubt that he and his followers were sincere in their belief that only by the overthrow of the Ola-Megler alliance and forced awakening from the foolish dream of eternal life could the Aqualians once more become a prosperous and happy nation.

There were many things about this eternal life proposition that were not clear to me, but it was obvious that Vodak and his followers distrusted the entire platform of Ola's promises.

Ola and Megler had produced some pretty convincing results with their theory among the Aqualians. But, while the temporary effects were persuasive, it seemed that Aqualian scientists, before Ola exiled them, had determined that the eventual results of the dream would be harmful to the race. Ola, intent upon taking the bird in hand, disregarded the future harm his doctrines would do to the people.

All that I could learn of Fritz Megler pointed to a dependence upon Ola to supply him with glandular extracts for his rejuvenation business among human beings of the surface.

So the time passed, while I gradually perfected myself in the undersea language. I tried to be useful around the house and spent much time playing with what they called their child. Sympathy for their feelings could never bring me to question them about their unfortunate dependent.

The "child" was old, full-grown and

wrinkled, infirm in body as well as mind. He could not speak. He only crawled around the floor, or lay upon his back in his cradle, waving his big arms and legs like an infant. So infantile was his every action that I soon found myself considering and playing with him as I would a baby.

This, I thought, accounted for their persistence in referring to this poor creature as their "child." Naturally I refrained from mentioning a subject so delicate. The "child," I was sure, must have been the senile grandfather of either Vodak or his wife, to whom they felt duty-bound.

Early one morning Vodak returned with a new vehicle he had just purchased in town. It was a combination automobile and flier, capable of rolling along on its three metal wheels, or skimming through the water like a fish, using mechanically operated fins and a motorized tail. The passenger compartment in the little car was enclosed with polarized glass, giving one-way vision.

THAT morning, for the first time, Vodak took me into the city of Aqualia. The gorgeous city was even more dazzling from within. Everywhere were lovely, shimmering colors. The streets were paved with beautiful coral-shells that vied for beauty with the aged buildings, to which clung tons of multihued crustaceans.

The streets and the water above them were filled with people going to work in automobiles, or riding upon fish. Shopkeepers were opening their stores. Women, colorfully dressed, were going to market. Everywhere was life, but here also were the seeds of discontent. Ola's troopers were everywhere plainly in evidence. They permitted no loitering on corners. Nobody was allowed to converse more than a minute with another upon the street. Talk of the government was taboo.

This first trip into Aqualia was for the purpose of acquainting me with the thoroughfares and location of Ola's palace and the adjoining laboratories, where Fritz Megler and my father were stationed. Vodak impressed upon me the simple traffic regulations and taught me the operation of the car.

He let me drive into the city alone next day, warning me, however, to avoid showing myself or talking to anyone. The time was not yet ripe for the revolution. When I questioned him, he added that somewhere in the palace, my father and Barbara Lawrence were kept.

When I drove by alone and realized how close I was to them, after all these long months, a lump rose in my throat. I longed to see them. I parked in front of the mighty palace, looking up at the long, broad stairs that led inside. Officials, soldiers and civilians were coming and going. Suddenly I gasped in astonishment.

A man was coming down the long, worn promenade with a woman beside him. Their glass diving suits glistened like mine. There were oxygenator tanks upon their backs. But the man approaching, everything about him, even his face, was so like me that I felt as though I were sitting in the car and watching myself outside.

Then I realized that the woman was Barbara Lawrence!

As they came toward me down the stairs, the truth finally struck me. This man who so much resembled me was my own father—Professor Theodore A. Norris!

CHAPTER XV

Strange Reunion

I SWUNG open the car door. At the point of leaping out, I realized that my father and I could not be seen together. Waiting until they came quite close to me, I attracted their attention. A moment later they were inside my car. Their happiness at seeing me with equal to mine at seeing them. They had given up all hope of ever contacting the upper world again.

It is strange indeed to be talking to your own father, who appears no older than you do. In the place of the

old Professor Norris, who had been confined to a wheelchair, was a young, active man—the man Professor Norris had been forty years ago!

Briefly I told them my experiences since they had disappeared from the upper world.

"It is a marvel, Dan, that you got here alive," Barbara said. Her voice sounded different somehow. "Only the son of your father could have done it."

WE had reached the plaza. I stopped the car and looked at Barbara again, the first chance I had really had to scrutinize her face closely. A cold chill ran up my spine.

This was not Barbara Lawrence!

My mind raced back to the night of a garden party in Oakland. I saw a kind, elderly woman holding a little pigeon in her hand, laughing gaily. Here was that same woman, but looking now as she must have when she had been young. The young woman beside me was Mrs. Lawrence—Barbara's mother!

For a long moment I was speechless. Like the subtle change of one character into another during the course of a dream, Barbara Lawrence had metamorphosed into her mother and her mother now was a young woman. Could I be experiencing some frightful reversal in time?

"Where is Barbara?" I finally asked, fearing that some harm had befallen her in this awful, twisted world beneath the sea.

"She is in the palace," her mother replied a little sadly.

"But is she well?"

"Quite well, Dan," said my father, but I sensed a reservation in his voice.

"What is all this about?" I demanded. "What accounts for your appearance? Why were you brought here? For what purpose are our people being captured in such great numbers? What connection have Fritz Megler and you with all this?"

My father smiled. He seemed quite tired, in spite of his rejuvenation. We looked alike now, but his eyes were the same as they had always been. They were old, kind and always weary.

"I don't wonder that you're confused, my son," he said. "It has taken me a long time to find out the partial truth and even that little is quite unbelievable. I am certain that all the facts will never be known, for Fritz Megler and Ola are not inclined to verbosity."

To avoid suspicion I had driven to the public plaza, where we could park and talk undisturbed. Dad was looking out the car window, watching the undersea folk who passed by in the streets, or swam through the water.

"They are a great deal like us in many ways," he mused. "Their evolutionary history is likewise quite similar to ours, in a reverse sort of way. Eons ago the parent human stock divided, as you know. One branch, the future *Homo sapiens*, crawled out of the prehistoric sea and took to the land. The other branch stayed in the ocean and swam deeper and deeper.

"The Terrestrial group evolved into man. The marine group evolved along lines naturally adapting it to an underwater environment. But, having come from the same original parent-stock as man, it has certain more or less predestined human potentialities. Hence today its people are part fish and part human.

"Just as we live at the bottom of a great ocean of air, with lungs through which the atmosphere passes, so the undersea men live at the bottom of a great ocean of water. They have gills in place of our lungs. You will recall, my son, that in man's early history he also had gills. They still appear, in fact, for a short time during embryological development.

"The undersea men have hands and feet similar to ours but, as you see, these are webbed for swimming. The webbing also extends between the arms and legs on each side of the body, like flying squirrels. They swim like manta rays. Their evolutionary development has equipped them to withstand the tremendous pressure of the ocean depth, which makes it impossible for them to come to the surface without exploding.

"The undersea men have an advanced civilization. Their scientists

dabbled in radio and devised means of intercepting our radio broadcasts. For technical reasons, however, they have never been able to perfect sending sets. To them the discovery that their watery environment had an end to it, that intelligent beings lived above them only a few short miles away, was an astounding one, as their presence has been to us.

"After years of listening in to our broadcasts, they eventually deciphered our English language and learned a great deal about us. One thing that impressed them particularly was our relatively longer life span. They themselves live only about twenty years. What is worse is that their statistics show that the life span is growing even shorter."

I pointed out the window at an old man who was being led along by a small girl.

"Maybe you can explain that man," I said. "He must be very old."

"Those two people are mother and son," Mrs. Lawrence replied, so seriously that I knew she was not joking. "The one who seems old is in reality a very young child. He is actually so young that his mother has to keep hold of his hand. I'd say she is about fifteen years old. He cannot be much more than six months."

IT was hard to believe this, but as I watched the pair, the old man suddenly stopped his toddling gait. Pulling his mother to a halt, he reached down to pick something up in the gutter. The little girl, scolding sharply, jerked the old man forward and dragged him out of sight around a corner. He was holding back, bawling lustily.

"The Aqualians were just as astounded to realize the truth about us," my father continued. "It took them a long time to believe that we on the Earth's surface are born as infants, growing older and more wrinkled with the passing of the years, until eventual senility and death occur. They, on the other hand, hatch as old people. With the passing of the years, they grow progressively younger until they die, not in the stage of what we know as senility, but infantilism.

"Thus the seaman is born as an old man or woman who gradually becomes less senile, develops the energy of middle age, then youth, passes through adolescence, soon is too young to walk and eventually dies as a tiny, helpless infant, after living about nineteen or twenty years. The strange part about this is that the brain does not retrogress, so we have the picture of a tiny infant with the mind and intelligence of an adult."

The thought of the old man in Vodak's house made me smile. How could I have guessed that the ancient one was in reality their young child, not the imbecilic grandfather that I had first imagined him to be?

"From their radio knowledge of us," added my father, "they saw great potentialities for everlasting youth, if their scientists could obtain some surface men for study and experiment. A scientific combination of the two opposing growth trends of the Terrestrials and the ocean men might even give them the secret of eternal life.

"An ocean man, for instance, loses the active youthfulness of full manhood and retrogresses to childhood. He can, they hope, have his growth and age processes reversed by injections of an extract synthesized from the secretion of five key glands within the bodies of Terrestrials. After this injection, he should start losing the characteristics of oncoming childhood and gradually acquire his former adult characteristics.

"Thus, by periodical operations, say every three or four years, first using a Terrestrial gland extract and then an Aqualian gland extract, they would be able to keep themselves alive and youthful forever. That was their scientific reasoning. To make certain, they had to experiment on Terrestrial men. That was where Fritz Megler entered."

I saw him glance at his Aqualian wrist-watch.

"I may as well take you out to the Oakland project," he said, "and let you see at first-hand how Megler and Ola have cooperated in this glandular exchange."

Mrs. Lawrence asked me to let her

off in front of the palace, since Barbara would be worrying about her absence. Although I was eager to see Barbara they both insisted that I wait outside, nor would Mrs. Lawrence promise to inform her of my arrival. There was a strange reticence concerning the girl that made me uneasy. My anxious questioning brought forth no explanation other than that she was well.

Dad had me drive to the garage where he kept his car. We transferred to his, leaving mine there. A moment later we were speeding along the highway outside the city, across the plain toward Project No. One.

AS he often visited this tunnel on business, Dad stated there would be no trouble getting in, for he was determined that I see personally exactly what was in store for those who had vanished with their homes in the great Oakland catastrophe.

Just as he predicted, we had no trouble at the gate, once we made our way through the thousands of Aqualians waiting outside. Dad simply opened the little ventilator wide enough for the gate captain to recognize him, then ran our car up on a waiting trolley. Instantly the trolley began rocketing along its track within the tunnel, exactly as Vodak and I had shot through the tunnel of Project No. Two.

It was some eight hundred miles in to our destination. Since we would not be there for another forty-five minutes or so, Dad made use of the time in telling me more about Fritz Megler, his one-time partner.

"Fritz was tired of being outshown by me. At least, that's what he said. He had been carrying on secret experiments in the field of radio broadcasting, hoping to hit upon some idea that would bring him fame. In the course of his experiments with some of my earlier forgotten inventions, he developed a remarkably sensitive sound-detecting device, such as is used in listening for submarines and airplanes, but thousands of times more sensitive.

"With this device he happened to hear some unintelligible sounds which came from a great distance, but he concluded that they had an intelligent pattern. Actually what he heard was the concussion communication system of the seamen, a system based on the fact that sounds made by concussion carry swiftly underwater and through the ground. Megler was easily able to calculate their source and distance.

"With his radio transmitter aimed downward toward the spot, he ventured to send a message. To his amazement, he picked up an answer on the sound-concussion detector in English, from a scientist-politician named Ola. Having thus established contact with the undersea men, he learned of their desire to experiment with the prolongation of life. He carried on scientific talks with their greatest scientists, always under Ola's supervision.

"Together, he and Ola came to the conclusion that human life at least might be prolonged if certain gland extracts of the two races could be interchanged. The undersea men could not come to the surface, but Megler was confident that he could go down to them. He remembered that I had long ago devised a pressure-resisting bathysphere. As with many of my inventions, I had never made practical use of it.

"Megler built the bathysphere in the basement of his private home on the bay, using the plans he had stolen from me. He succeeded in getting down to Aqualia. An experimental operation in which he traded gland extracts with another seaman was successful. Ola and Megler are clever and for this first experiment they had used the best brains in Aqualia. Just think of the care that was necessary.

"Because of the vastly different pressures under which seamen and surface people must exist, they could never actually come in contact with each other in the same medium. Thus, before Megler's operation could take place, it was necessary to devise and construct a special operating chamber in which Megler could be placed under the customary pressure of fourteen and a half pounds to the square inch.

"In the sides of this pressure-resist-

ing chamber, which you will soon see, are holes through which Aqualian doctors can thrust their arms. These holes are equipped with a special type of valve or gasket which allows no change of pressure when the arms are thrust through.

HIS eyes, so startlingly old and weary in that young, handsome face, grew hard and cold.

"Megler must have been jubilant over the success of his operation and the prospects of returning youth. This would give him an endless number of years in which to work as a great scientist.

"Besides, he would be able to exploit the rejuvenation idea, gain world acclaim and make millions of dollars. But if Megler is clever, Ola is equally so. He refused to let Megler return to the surface unless he promised to help obtain surface people so that the Aqualians, too, could enjoy the blessings of eternal life and youth, along with the blessings of Ola's eternal regime. Ola, in return, promised Megler a continual supply of fresh serum extract for the rejuvenation business he would establish in San Francisco.

"But for Megler to transport to the sea bottom in his small bathysphere the number of Terrestrials necessary for the job would take far too long. They had to find a method of capturing thousands in one large group. Since the Aqualians had done a great deal of undersea mining for precious metals and rocks, their methods were far advanced, compared with ours. Ola decided to capture a densely populated section of an American coastal city by actually undermining it.

"Ola's scheme materialized, all right. Thousands of Aqualians flocked to Ola's support. He assassinated the rightful ruler of Aqualia and started his bloody purge of all those who opposed his scheme. But to keep the support of the people, he had to furnish them with plenty of serum. The time required for this tremendous engineering feat, although highly successful, was also far too long. Megler told Ola to continue the second city lowering job beneath San Francisco.

"In the meantime, he believed he could make it possible for the Aqualians to come to the surface themselves and actually capture all the Terrestrials they would need. Ola constantly held over Megler the threat that they would give him no more Aqualian glandular extracts, unless he completed the invention of the pressure-resisting suit for them to use in their invasion.

"Megler returned to the surface in his small bathysphere and tried futilely to invent a pressure-resisting armor of some sort. Realizing he was stumped, he was forced to hire me, much against his egotistical will, to invent it for him. It was these plans that you must have found in my files, for your suit is identical to mine."

I interrupted to ask if he knew what Megler was up to.

"Fritz told me the suit was to be used for experiments in undersea mining and salvage work," Dad replied. "But one day, while working in Megler's laboratory on the diving outfit, I overheard him trying to make love to Barbara. When she refused his attentions, he became angry and threatened to kill her mother. This gave me a clue that he had some knowledge of Mrs. Lawrence's whereabouts and therefore was connected in some way with the Oakland catastrophe.

"I went in immediately and denounced him, threatening to expose him to the world as a traitor to mankind. Barbara heard me, of course, so Megler was forced to get rid of both of us, lest we expose his secret. He had already become a young man, you'll remember, and I was old. He had little trouble overpowering both of us. Under threat of a gun, he tied us, later took us to Aqualia with him and injected us with youth serum."

CHAPTER XVI

Preparing an Invasion

DAD went on to tell me how Megler made him work on the glass pressure suit in a special building ad-

jacent to the palace. Ola forced him to develop short cuts in their mining machinery. They goaded him on to aid them by constantly threatening bodily injury or death to Barbara and her mother.

He stated that their plans now were just about ready for the coordinated lowering of a section of San Francisco and the invasion out of the ocean. For this campaign, the Aqualians would use the Norris glass pressure suit to enable them to withstand the lower pressure outside the ocean.

Our trolley car suddenly came to a stop at the end of the tunnel. With a sweep of his hand, Dad pointed out the scene before us.

"There is the half-mile-wide circular section of Oakland that sank into the Earth."

For a long time I was silent. It seemed as if we were looking upon a city of death, enclosed within the Devil's inverted fish-bowl. Lowered into a cylindrical excavation at the end of a giant piston, the section of city had been completely sealed by a thick glass dome before reaching its present position. The poor people who had been trapped were thus temporarily saved from the awful pressure of water that surged over and around them.

That many of those who had been in the city still lived, I was certain, for I could see families sitting in little groups upon the front porches of their homes. A few shabby children played half-heartedly upon the dead lawns. Men and women walked aimlessly through the blind streets. Everywhere was the listlessness born of futility.

Automobiles remained in the streets exactly as they had been parked or swung over to the curb when the catastrophe struck. Weeds that poked their heads out of cracks in the pavement had entwined around the wheels. There was little use for automobiles in a world a half-mile wide.

Almost directly in front of us was the section of Mrs. Lawrence's house and yard that had slipped off and dropped into the chasm. Most of the beautiful shrubbery had died of thirst. Only the more sturdy vines and persistent weeds eked out an existence in the dry, dead soil within the tomb.

"How have those persons lived this long?" I asked.

My father shook his head sadly.

"It is too bad they have lived at all, for their fate is horrible. It is necessary for Ola and Megler, however, that they stay alive until they are needed. For that reason the Aqualians have planted huge motors that separate oxygen from the water and pump it in through those great pipes you see entering the top of the dome. Bad air is sucked out through the ones along the side. Only enough food and water are piped inside to keep them alive."

While we watched, I noticed a party of Aqualian warriors, dressed in glass pressure suits equipped with water tanks with which to breathe, entering the enclosure through a system of doors and locks. They carried rifles of some sort. When they were inside, they went around to several houses. They came out of each, dragging one or two victims.

A group of men tried to give battle by throwing rocks and stones. Some even had revolvers, but the pressure suits of the Aqualians were strong enough to resist bullets. The undersea men soon dispersed the crowd by firing among them with a strange gun. Then they dragged the wounded, along with the others they had captured, into two adjoining glass buildings. In them I saw long rows of tables and workbenches upon which were shiny instruments.

"What are they going to do with them?" I asked in alarm.

"You may as well go over and see for yourself."

"How can I?"

"I have often been here. We look so much alike now that they will never suspect you."

LEAVING Dad behind in our car, I walked over beside one of the transparent buildings. It was air-filled, so the surface people were still alive as they were dragged in and strapped down upon the tables. Several warriors were standing outside when I approached. They paid not

the slightest attention to me.

"The surface men are going to enjoy a rare privilege today," one of them was saying. "The great Ola himself is going to operate upon them!"

"The lucky creatures!" another exclaimed.

"They both glanced over toward an ornately decorated underwater limousine that rested upon a flat trolley standing on a side-rail. There must have been twenty-five armed guards stationed about the car.

My attention was attracted to a large boxcar that pulled to a stop on a nearby track. About twenty Aqualians poured forth and were escorted by soldiers into the similarly equipped building adjoining the first air-filled one. The Aqualians eagerly climbed up on their tables, nor were any straps needed to hold them down.

A loud bell clanged. The door of the ornate limousine slowly opened and out stepped a gorgeously harnessed individual who I knew must be Ola.

He was tall and thin, with a cruel, lean face. In contrast with most Aqualians, who have light, pinkish scales, Ola's were perfectly white. White, too, were the iris and pupil of his blank, naturally sightless eyes. His puckered mouth, which sucked open and closed with each breath, was like a fresh bullet wound. The short antenna atop his forehead that ended in a shining eyeball was weaving around jerkily, nervously inspecting every face that peered at him.

Directly behind him came Fritz Megler, who wore a glass pressure suit and was carrying a little metal suitcase. He looked even younger than he had when I last saw him. Anyone seeing him for the first time would have guessed he was twenty.

As Ola passed, everyone raised his left foot sole forward toward his ruler and mumbled something that sounded like: "Hol Ola!"

Ola came abreast of me and stopped. The single eye on top of his forehead seemed to be boring right through my glass pressure suit and into my soul. His two other eyes appeared to be unemotionally surveying me. Was he aware that I was not Professor Norris?

Megler came up then and stood staring intently at me. I could feel my heart beat rapidly, my skin grow cold. He certainly should suspect the truth!

For what seemed an eternity neither of them spoke.

"Norris, I want ten thousand pressure suits ready in a week," Ola abruptly snarled. "Megler has the suits ready, but I am not satisfied with the breathing device you are supposed to perfect. My soldiers must be able to breathe continually in the surface atmosphere, not just for the duration of the oxygen supply stored within the water tanks on their backs.

"I expect you to have this problem solved within three days, so that the diving suits may go to the factory for production and installation by the week's end. I shall not be so tolerant of your tardiness in the future with my orders, Norris. That is all, except remember in the future to salute the people's ruler!"

HE turned and walked away. I felt like saluting him with the toe of my heavy boot. Fritz Megler waited until Ola was out of earshot.

"You heard his orders," he snapped. "Only because of me has he allowed you and the others to live. The sooner you get that oxygenator perfected, the sooner we can satisfy Ola, have the invasion over with, get my serum and go up to the surface again. The moment I am through here, I want to go back to the laboratory with you and see what you have accomplished."

Megler called a guard and issued orders that I was not to leave until he was through inside.

Ola had donned a pressure suit with a large tank of breathing water on his back. He entered the air building with several Aqualians, similarly dressed, who were probably doctors. Megler went into the adjoining building, which contained the Aqualians who were lying prone upon the tables.

I have no heart to dwell upon the horrors of the next hour. Ola moved from table to table until he had "operated" on each of the poor victims who were strapped down. Had not the

guards been there to restrain me forcibly, and but for the system of locked doors to the air chamber, I would have leaped inside and given my life to save those poor devils. However, other than the mental anguish each must have suffered before his doom came, there was probably little physical pain.

Under each table was a type of X-ray that flashed a picture of the internal organs of the victims upon a horizontal screen fastened directly over them.

Ola moved deftly. First he jabbed a long, thin hypodermic needle into the heart. Even as the death tremors racked the poor body, he inserted a separate needle into each of the seven major ductless glands, withdrawing an extract and putting it into a separately sealed vial. There were seven large vials, each finally containing the extract from a gland. These were then sealed and passed through the pressure doors into the chamber where Fritz Megler awaited with the Aqualian patients.

Except that he did not kill his patients, Megler had been doing exactly the same with the Aqualians. Now he also had vials containing extracts from their glands. These he sealed in watertight vacuum vials and deposited them in the metal case he had carried with him.

Then he took the vials Ola had passed through to him. Inserting another hypodermic needle into the special valve on top, he proceeded to draw out various amounts of extracts from each of the seven vials, which he mixed thoroughly in the syringe with several chemicals.

He injected a small amount of this synthesis into three glands of each Aqualian, which he had located in the X-ray screen. The needle he used must have been of microscopic thickness. I could not see it, nor did the Aqualians betray any sign of pain when it entered their bodies.

When the procedure was over, the Aqualians signed some papers, receiving in return a little metal plaque showing that they had been rejuvenated. The dead surface men and women were thrown into an enclosure containing a species of giant barracuda. The dead bodies were ripped to shreds and consumed in less than a minute.

OLA came out and removed his pressure suit. Megler picked up his metal suitcase containing the Aqualian gland extract. Falling in behind Ola, he motioned me to follow them. A moment later we were inside Ola's special car on top of a flat trolley and were speeding back along the black tunnel.

I had no doubt that Dad had seen me leave with Ola and Megler. He could easily return in the car without arousing suspicion. He had told me that he often came here alone, bringing food and small comforts to try to alleviate the suffering of the trapped surface people. If the guards noticed his car leave, they would merely assume Dad's chauffeur was driving it.

I was glad of the opportunity of accompanying these two, for the ride back to the city gave me a clear picture of their plans.

I learned that as soon as the pressure suits were ready, Megler would lead thousands of Aqualian warriors up out of the ocean. They would be mounted upon the great logars, which could move easily upon land. At the same time the hydraulic pumps of Project No. Two would be started and a huge portion of San Francisco would begin sinking into the Earth.

In the resulting panic and confusion, the invading seamen could easily capture thousands of people, stuff them into waiting compression tanks and drag them down into Aqualia still alive. It was necessary that surface people be kept alive until the time of "operation" on their glands, for it seemed that death would quickly spoil the extracts.

It was a horrible plan and one that was likely to succeed. Although it was plain that neither Ola nor Megler trusted each other, mutual advantage would dictate their working closely together, at least until they succeeded.

Ola would have plenty of Terrestrials whose gland extracts would fulfill the promises he had made to his followers and assure his tenure in office. Megler, in turn, would be sup-

plied with enough Aqualian gland extracts to allow him to return to the surface and stay indefinitely, making millions of dollars with his rejuvenation idea.

How could I avert the terrible disaster that threatened San Francisco and possibly the entire civilized world? At the same time I had to save the people of Oakland, my father, Barbara and her mother, for Dad had assured me that we could not live over five years in this sunless world, entombed in our pressure suits. The human body needed contact with sunlight and the surface atmosphere.

CHAPTER XVII

Helplessness

AT the end of an hour I found myself in a heavily guarded factory adjoining the palace, with Ola and Megler beside me. I did not need the evidence of the thousands of glass pressure suits, complete in all but one detail, to know what I was going to be forced to discuss.

"Let us proceed into your laboratory," suggested Ola, "and see what you have accomplished on the breathing device to be attached to the pressure suits."

We climbed several flights of stairs, went down a long hall, passed many closed doors. Finally, at the end of the large building, we entered a small laboratory.

"Where is it?" demanded Ola.

"Where is what?" I asked.

"You fool, why have I been tolerating your putrid existence this long, except in the hope that your meager knowledge might relieve my superior brain of some of its lesser duties? Now you can't even remember what we came here to inspect!"

I remembered perfectly well what we had come to inspect. But I had not the slightest idea of what work my father had done on the oxygenator, nor even where the model might be found in his laboratory.

Ola and Megler were facing me as I stalled for time. A strange light came into Megler's eyes. Then I saw something even more startling behind them. The laboratory door was ajar and down the hall a man was walking toward the room we were in.

It was my father!

His eyes were averted, as usual, while his mind wrestled with some problem. He would be inside his laboratory in a moment. To be seen together would mean the end of our future plans, with more torture for my father and death for me.

And there was nothing I could do. Before my father could see us, Ola or Megler would hear the sound of his glass boots upon the polished floor and turn toward him.

"There!" I blurted suddenly, pivoting about and pointing toward a workbench at the far end of the laboratory. "There you will find the oxygenator model!"

For a long moment neither moved. Then Ola grunted. Brushing past me, he started toward the bench, while Megler followed at his heels.

Swiftly I vaulted a table and crouched down behind it just as Dad came into the laboratory. He saw me immediately and must have taken in the situation at a glance. But without altering his pace, he walked right past me toward Ola and Megler.

"There is no model here, Norris," Megler barked.

"Not that bench, Megler, the one beside it," I heard Dad reply.

The next moment I had crawled to the door, pulled it softly closed behind me and started back down the hall.

After traversing half the distance along the passageway, I heard the sound of a party of men coming up the stairs toward which I was headed.

It was not unlikely that they were coming to converse with Ola. The guards below had told them of their leader's whereabouts. If they passed me now in the hall and immediately after saw Dad with Ola, our advantage would be discovered.

The great hall was lined with doorways. I leaped through the hanging drapes of the one nearest me just as the party came to the head of the stairs.

I FOUND myself in a little anteroom with a marble door on one side. My ear was close to the drapes. So intently did I follow the group down the hall that I failed to hear the marble door open behind me.

"Did you not but a second ago walk alone into your laboratory, Norris?" asked a gruff voice.

Wheeling about, I found myself face to face with a burly-looking Aqualian officer. He was carrying a tray of half-eaten food. There was an evil sneer on his face.

"You certainly get about quickly," he snarled. "First I see you coming upstairs with Ola and Megler and going to your laboratory. A moment later I see you again coming upstairs and entering your laboratory. Now you are here. Something's wrong somewhere. Let us go together to Ola and determine if you are not also in there talking with him."

Not bothering to set down his tray, he grabbed me roughly by the arm and started toward the hallway. I clenched my fist. Backed by all my weight and strength, the heavy glass knuckles of my balled gauntlet crashed full upon the Aqualian's jaw.

He shot backward as though he had been hit with a shark's tail, smashed directly out from under the tray he had been carrying. I caught it before it clattered on the floor. The Aqualian slammed against the marble door. It flew open as he hit it. Without slowing, he rolled into the adjoining room and lay still upon the floor.

"Dan!" someone called in a childish voice from the next chamber.

I stepped to the threshold of a simply furnished room. With the exception of the Aqualian officer lying upon the floor, I could see no one.

"Dan!" came the same childish voice again.

I sprang inside the room. Against the far wall was a little cradle with raised sides. Tiny hands grasped the top rail, over which a small face was peering at me. It was a surface girl, not more than three years old, protected in a little glass pressure suit.

"Oh, Dan, I thought I'd never see you again! Thank heavens you are here!"

See me again? What was the child saying? I had never seen her before.

Suddenly I heard the sound of someone moving about in the connecting room.

"You must get rid of the body," the little girl said hastily. "Throw it out the window. The scavenger dolphins will devour it before it reaches the street."

"But he may not be dead," I objected, bending over the body.

"He is," the little girl affirmed dogmatically. "The gills in the sides of his neck are no longer moving. Quickly now, before you are both discovered!"

I shoved the body out the window. As she had predicted, the dolphins began tearing it into shreds before it had sunk ten feet toward the street below. These scavenger dolphins were everywhere in Aqualia. Since they would not harm a living body, but ate only dead flesh, they were an admirable solution to the garbage disposal of the great city.

"You must go now," the little girl said, "before you are discovered. Come back in an hour, Dan. My nurse will be gone then."

THE footsteps in the next room were approaching the door as I backed into the anteroom and closed the marble portal. Stepping across to the drapes, I peered cautiously out into the hall. Ola the Mighty and Fritz Megler were descending the stairway to the right.

As I ran down the hall to Dad's laboratory, my mind was haunted by the half-familiar face of the little girl and the mature manner of her speech.

Dad was sitting at his desk with his head buried in his hands as I entered. He greeted me worriedly and said that he feared greatly for my safety. Sooner or later our hoax would be discovered. I opened my mouth to ask him about the little girl.

"Ola wants to start his invasion in a week!" Dad said abruptly. "That means I must give them this perfected model of our oxygenator in a few days, so that their factories may turn it out in quantities to be attached immediately to the pressure suits al-

ready waiting. I shall be doing a terrible thing in putting this perfected model in their hands. If I don't give it to them, though, I dread to think of the consequences that will befall those we love."

He said that Ola had threatened death in the barracuda pens to Mrs. Lawrence and Barbara, as well as to himself, if the oxygenator was not soon forthcoming.

"Even that would be preferable," he continued miserably, "to selling humanity so cheaply to these two evil men, but my death would avail nothing. Both Ola and Megler are sufficiently capable scientists to perfect an oxygenator eventually. I have aided them, perhaps speeded their villainous scheme, but no one will ever know how heavily the pressure of their threats has weighed upon my shoulders.

"It was only by aiding these two now that I felt I could gain time to serve humanity later. Even with my death, their dire plans would some day bear rotten fruition. The secret experiments I have conducted down here with your friend Vodak and other honest Aqualian scientists have assured us that this glandular extract exchange can only end in a worse fate to the individual than the inevitable natural death that would come to each of us some time.

"We have determined that these glandular extract injections, while apparently functioning as expected for awhile, are almost invariably destined to result in an unpredictable accelerated retardation of the body metabolism. In other words, Megler injected me with an extract of Aqualian glands. I have regained my youth much more rapidly than has Fritz Megler, yet the metabolism is decreasing even more rapidly now.

"Perhaps in six months, maybe longer, I shall die of infantilism. That is a much worse and faster fate than if I had continued toward death in the normal manner as an old man. This same condition applies to the Aqualians who have been injected with human glandular extracts. They will proceed toward what they call 'youth' at a rapid rate, until they die sooner than they ordinarily would.

"Ola and Megler think that all they have to do in this case is to inject individuals with gland extracts from their own race and the metabolic process will reverse again. By alternating the injections when necessary, they promise that continual youth can be maintained. But Vodak and I have discovered differently. There is no turning back, once rejuvenation has commenced by this method of Ola's and Megler's.

"However, I have been working on a serum, a chemical synthesis that may at least counteract the opposite force at work on the normal metabolism. That is, by injections of this Serum X, as I call it, I might be able to cause the body to resume its normal maturation. This is the one hope, at least, the only chance the Aqualians and Terrestrials will have to undo the harm that Ola and Megler have done them.

"In order to perfect this Serum X, I have forced myself to obey the orders of these two men, although I have delayed and stalled all along as best I could to gain time. I may no longer be able to do this, for the time of reckoning has finally come."

I ASKED Dad if Ola or Megler did not realize the consequences of their plan.

"They do not listen to me," he replied. "They are after power, both of them, regardless of the consequences to their victims. Ola may suspect the truth, for he has not allowed himself to be injected. Megler's youth has descended quite slowly and he believes that he has little cause to worry about death for years. No one can ever be certain. Infantilism may come upon him at any time."

It was plain that Dad was right in appearing to aid Ola and Megler. Only thus could he live and hope to save the people whom Megler injected with the fatal youth extract.

But was there no way we could save the thousands who were doomed to death when Ola's warriors would roll out upon San Francisco and drag them down to the depths of the sea? Was there no way we could save those whom he would butcher mercilessly

for the sake of the Aqualian fanatics who sought eternal life? Was there no way to stop Ola's hordes before they started?

Vodak and his followers were greatly outnumbered by Ola's trained legions. There was little hope here. But if the Aqualians could be stopped as they came out of the sea— Here was a possibility and a good one! If we could warn the coast defense in time, the Navy, ground troops and air force of the United States would stop Ola's legions, or I didn't know our boys!

"Is there any way we can communicate with the surface?" I asked hurriedly.

"I'm afraid not. The Aqualians have perfected no sending sets of the type we know. While they are able to hear our radio broadcasts, their only type of communication over any considerable distance is based on concussion. Megler overheard their messages because he had developed an extremely sensitive set for picking up and amplifying the vibrations. That set is the one you saw that night in Megler's basement. It is probably still there, but it's useless as far as we are concerned."

"But if they can detect our radio waves, why haven't they developed a similar means of producing them? It's certainly possible to create a vacuum under water. I've seen them created in the vials where Megler stored his gland extracts. I can't see any reason why their scientists couldn't eventually develop the vacuum tube necessary for radio broadcasting. In fact, they must already have something similar, or they couldn't hear our surface broadcasts."

"They have tried producing electrical oscillations in the water, similar to our radio waves in the ether," Dad said. "But a strange thing occurs whenever they attempt such a broadcast. Every Aqualian within the city and for miles around is rendered temporarily blind for hours. Close proximity to the source of radio waves seems to exert a stupefying effect upon their pineal eye, the organ that grows from the tops of their heads and which is sensitive to gravitational attraction, the only means by which they can see.

"Just why this should occur, no one has been able to figure out. Our radio waves, emanating from the surface and coming to them over some distance, do not seem to affect them. But to broadcast similarly down here is out of the question."

"If we cannot warn our country this way," I said, "then I'll have to get up there somehow. Where is the bathysphere in which Megler brought you down here?"

Dad shook his head. "Perhaps Vodak knows by now. His agents have been searching for it."

CHAPTER XVIII

The Egomaniac Supreme

BUT Vodak did not know when I confronted him with the question that evening. He agreed to launch a new search for Megler's bathysphere when I told him how urgent the situation was. If Ola's hordes could be stopped in time by American forces, it would help turn the tide of revolution that Vodak had prepared to launch as soon as Ola's troops had left Aqualia. However, after several days, Vodak's men could discover no trace of Megler's craft.

When Dad sent word to me to meet him in his laboratory early on the fourth day, I hoped that he had word of the ship. But this was not the reason he had called me.

I slipped unobserved into his laboratory. He confronted me immediately with the horrible fact that he had delivered the finished model of the oxygenator into Megler's hands a couple of days before.

"Ola threatened death to Mrs. Lawrence and Barbara," Dad moaned. "He brought them both in here for torture soon after you left the other day. To save them I had to give up that model."

His voice trailed into silence as he sank dejectedly into a chair at his workbench and buried his face in his trembling hands.

"The factories will deliver the fin-

ished pressure suits, equipped with the improved oxygenator, today at noon. Sometime tomorrow Megler plans to march. Ola will take charge of Project Number Two. When the invaders storm out of the ocean, San Francisco will begin dropping into the Earth!"

Just then there came a loud knocking on the laboratory door, which I had been careful to lock after I entered.

"Hol Ola!" shouted a gruff voice. "Your presence in the radio room is demanded immediately!"

Dad looked at me, startled.

"I'll go in your place," I whispered. "Maybe I can get a hint on Megler's bathysphere. If he is leading the troops, he'll undoubtedly prefer to go in his ship, rather than on a logar's back."

"Did you hear me?" demanded the angry voice. "I have orders to bring you. Open the door!"

"Hol Ola! Just a moment." I whispered to Dad: "Lock the door after I leave and stay out of sight. You can't be two places at once."

I went with the guard to the radio room. It was a large chamber at one corner of the palace, glassed in on two sides. A marvelous view of the city could be had from this vantage point. Here Ola had assembled his dignitaries, officers and aides for the purpose of reviewing his troops before Megler led them off toward the surface on the following day.

The place was equipped with a complete apparatus for receiving surface broadcasts. Throughout the room were rows of men seated before earphones, listening to broadcasts from every city in America, as well as many foreign stations. Here, in times of peace, scholars and students assembled to study the vast stores of information that were received, transcribed and catalogued by the operators at their listening posts.

The shelves that lined the two inner walls were crammed full of books and pamphlets, attesting the mass of information these amazing people had already gathered from our radio broadcasts. Now, however, the room's entire facilities were devoted to war aims.

OLA rose and made a long-winded speech before the people gathered there. He outlined in detail his rise to power, the aims of his party and emphasized the might of his war machine.

"In a few days," he clacked in conclusion, his single eyeball glazing fanatically, "the Aqualians march! Never before in our history will so many warriors have moved against so formidable a foe, one that all mankind has been battling since the ages began—a foe called 'Death!' The Aqualians will soon return with the means to prolong our lives eternally. The surface people we bring back with us should feel honored to be sacrificed to a cause so glorious. Hol Ola!"

There were many speeches by officers of the party, extolling the righteousness of their cause and urging victory. Some of Ola's generals must have been old for Aqualians. They were wheeled about in cradles and looked more like babies than elderly men. I was surprised to hear oratory come from those childish lips.

Then we were treated to a parade of Ola's troops in the street below. How many thousands there were, I could only guess. Each soldier was mounted upon a logar, a two-legged beast that resembled the Tyrannosaurus of prehistoric surface days. Each soldier was encased in a glass pressure suit, with a water tank oxygenator attached to his back. There was a larger one for each beast, strapped to the neck, with tubes running to a mask over the creature's nose.

Following the fighters came row upon row of chariots. Company after company of the wheeled vehicles rolled by, each completely enclosed by pressure glass and drawn by alligator-like beasts of giant proportions. These vehicles would serve to carry back the surface people captured in the invasion. Within these they would be kept alive until the Aqualians butchered them for their gland extracts.

It was a frigteningly long parade. Ola's face was twisted into an almost maniacal leer of satisfaction. His single eye seemed to gleam with pride as it followed each battalion that

passed below. Not until the last commissary division had swung by and the street become jammed with Ola's paid rabble-rousers did the Aqualian chief turn away from the window, a satisfied smile drawing up the corners of his chin, cruel lips.

An operator named Vandor Val tuned a loudspeaker in on a prominent radio station in San Francisco. The announcer in that city was introducing the next number. Now I could hear Fritz Megler's voice as he spoke into the sound-concussion transmitter to the engineer in charge at Project Number Two.

"Ladies and gentlemen—" the announcer was saying.

"Lower section one foot," Megler's voice commanded.

"The next speaker on the program will be the chairman of the San Francisco Chamber of Commerce, speaking on the subject 'Why scientists predict no earthquakes for San Francisco.'"

I could hear a rumble through the microphone, some exclamation of surprise. Then came the announcer's voice again, slightly ruffled.

"Ladies and gentlemen, we have just had another little Earth tremor. There is absolutely no cause for alarm. Our program will continue just as soon as our speaker recovers his spectacles—"

"Shut it off," Ola commanded. He turned to me and spoke so that everyone in the room could hear. "You see, Norris, I brought you here to show you how futile it would be for the surface to resist us. Little by little I have been throwing fear into the people of San Francisco. By the time my forces overrun their city and the lowering takes place, they shall be in complete panic, making it simple for my soldiers to accomplish their purpose."

The Aqualian chief stroked his scaly chin.

"In six months," he added, "we shall have used up the supply of surface people we shall have captured in this invasion. Then shall I want you to go up to them as my emissary and demand the sacrifice of five thousand surface men annually as the price they will have to pay for immunity from my legions."

If the situation had not been so serious, I would have laughed in Ola's face. Here was an underwater racketeer whose ego would make our Earthly dictators look sick.

"I'd be an unwelcome emissary," I said, "for your invasion will fail."

THERE was a deathly silence as I turned and walked out of the room, unhindered.

In the hall leading to Dad's laboratory I overtook Mrs. Lawrence, wheeling what appeared to be a baby's carriage. When I looked inside I saw the little girl with the sad eyes whom I had encountered several days previously and whose strange, haunting face had puzzled me so at the time. Suddenly I remembered that I had promised to see the little girl later that day.

"I am terribly sorry—" I began to apologize.

"Oh, Dan," the little girl interrupted in a whisper, for there were several guards lingering nearby. "I am so glad you are safe and well. Mother and I were worried."

"Yes," said Mrs. Lawrence softly. "I am taking Barbara to your father's laboratory now for her serum injection. We had intended asking your father about you."

A cold tremor raced up my spine as I looked down into the tiny face peering up at me from the cradle.

"Barbara Lawrence? Good God!"

Dad let us into his laboratory. Once I had recognized the diminutive features of the child as those of Barbara Lawrence, the full realization of the horror of the girl's predicament registered upon my brain.

"How—why did this happen?" I stammered, aghast.

Dad placed the girl's arm in a pressure dome and prepared to insert a hypodermic needle into her forearm.

"I told you, my boy, that none of us can predict the outcome of Megler's wild dream of eternal youth. His extract worked quickly on Barbara, causing her to grow young much more rapidly than have her Mother, Megler or I. Her only hope of salvation is this Serum X that I have developed secretly.

"There is a chance that it may cause an acceleration in her metabolic rate soon enough to effect a reversal in her growth processes. There is also the other chance, which Barbara is willing to take, that the serum will cause her death even sooner than she would have died of infantilism."

IT was a weird predicament. Before me were the three people I loved. My own father, but a short while ago, had been an old man with thin, white hair. Now he appeared no older than I. With his crop of thick, black hair and his smooth face, he resembled me to an uncanny degree. Here was the mother of the girl I loved, looking as her own daughter should have looked. And that daughter, Barbara Lawrence, the girl I loved, was now a child with the body of a three-year-old!

Dad sank the needle into the little arm.

The child—for I could not help but think of her now as a child—winced even while she looked up bravely at me and smiled.

"Why did Megler do this to you, Barbara?" I asked. "You had youth and beauty."

"He offered me a job when I finished college," she explained in her childish voice. "He showed me proof, which I realize now was forged, that you were in some way mixed up with the Oakland catastrophe. I believed him then. But when I continually refused his attentions, he sought an outlet for his anger by bringing me down here and giving the 'treatment' to Mother and me."

"He is a revengeful man," Dad said. "He sought to make me young so that I should not die of old age before I could see what scientific wonders he would perform."

"As heaven is my judge," I vowed softly, "Fritz Megler shall pay for his revenge!"

"And how do you propose to make me pay?" asked a gruff voice behind us.

I wheeled. Fritz Megler was standing in the doorway, a grim smile on his cruel face. We had neglected to lock that door.

Before he could make an outcry or draw the revolver at his side, I leaped toward him. The next moment my fist crashed hard against the glass armor that covered his chin. The sudden impact must have jarred his head with terrific force against the inside of his glass helmet. Megler collapsed in the doorway without a sound.

Before I could pull him inside the laboratory, I saw several guards who had observed the encounter running toward us down the hall. Dad was ready to lock the door when I jerked Megler inside.

"He's out cold and won't trouble us for some time," I said.

"This is awful!" Mrs. Lawrence cried. "He saw you both together!"

The guards were pounding at the door.

"Is there any other way out of here?" I asked.

"No. This is the only entrance."

"Where is your car, Dad?"

"In the street directly below."

I glanced out the window. It must have been two hundred feet to the avenue.

"We'll have to jump and trust to the water," I said.

CHAPTER XIX

Flight Through Water

I GRABBED Barbara up in my arms. Without waiting for a reply, I leaped out the window. The sensation of those first few seconds of falling were horrible, but we fell with no great speed. I even managed to keep on my feet when I alighted. Dad and Mrs. Lawrence were directly above and landed beside us. A moment later we were in Dad's car and were speeding out of the city.

"It will take them a little while to beat down that door and discover our absence," he panted.

"Unless Fritz Megler comes to in the meantime and spreads the alarm," Mrs. Lawrence added with a nervous laugh.

"We were lucky that everyone was still assembled on the main thorough-

fare when the parade went by," Barbara said. "I doubt if anyone saw us leave. I don't know why I didn't faint during that awful fall, unless it was because you were holding me so tightly, Dan."

I was still clutching the frail little body close to my heart and her tiny arms were clasped about my neck. Reluctantly I released my hold and put her down on my lap.

"I'm sorry," I said. "I must have been hurting you."

It was hard at first for me to realize that inside that childish head, behind that little girl's face, was the brain of a young woman. I had been holding her as I would a child. Only when she spoke and I looked into those sad eyes did I see again the Barbara Lawrence that I had known and loved. It was enough to break any man's heart. If Megler had done no other infamy, I would have hated him as much for what he had done to Barbara.

I had Dad drive us directly to Vodak's. That night we all held a council in the exiled king's house. Many of his trusted leaders were present. The discussion of our plans often grew heated, for the fury against Ola and Megler was almost fanatical.

"I believe I know exactly where Fritz Megler's bathysphere is hidden," Barbara told us. "He has boasted to me of being able to escape from Aqualia any time he wished, if Ola should ever lose power."

"Where is it?" someone asked.

It was pitch-dark, for it was night in Aqualia, so in that meeting there were many whose voices I could not recognize.

"I could go to it immediately," Barbara replied, "but it would be hard for me to describe its location. I only know that it is hidden in a cove high up in a cliff overlooking Project Number Two."

Vodak's spies informed us that the entire city was aroused by our daring escape. The fact that I, another surface man, had been able to get down to their kingdom and mingle unsuspected with Ola in his very palace, caused them great alarm. They feared that other surface men might come down in great numbers and avenge their countrymen's death.

Needless to say, Ola's agents were working furiously to squelch all such fear-engendering gossip among the people. They also had a great dragnet out for us, a manhunt never before known in Aqualia. To allow me to get to the surface and warn my fellows of their danger was not a prospect that Ola and Megler relished.

VODAK'S spies confirmed the information that Megler planned to lead the Aqualian army in a few days. It was decided that Barbara would guide me to Megler's craft the first thing in the morning. She and I would have supplies and we would immediately set out to reach San Francisco and warn them of the coming invasion. Then the United States Army, Navy and Air Force could prepare to fight against the invading hordes from the ocean.

Dad and Vodak would take over the task of leading the revolutionists into the great control room in the palace, from which the city lowering would be directed. Once inside, Dad would attempt to communicate with me in the basement of Megler's home in San Francisco, via the sound concussion communication system.

Our plans were then worked out to the final detail. Vodak realized that if he were ever to strike against Ola's regime, it must be while the vast army was divided.

The next morning, mounted on fast sharks and disguised in heavy apparel, accompanied by a band of Vodak's men, Barbara and I finally reached the cave where she was certain Megler's bathysphere would be found. We actually found the bathysphere—that is, what was left of it.

Someone, probably one of the more fanatical haters of the surface men who had been in Vodak's house last night, had arrived before us. The craft was destroyed beyond hope of repair for many days.

But Megler and his army would depart within several days. It was absolutely imperative that San Francisco be warned.

We hurried back to Vodak's as fast as possible.

"Vodak," I asked, "if one of your spies can obtain an army logar with complete equipment, I might be able to reach the surface ahead of the Aqualian army."

"There is a chance," he said. "One of my best intelligence officers is a trusted stableman at the barracks. I'll get word to him at once."

After what seemed hours, a huge truck arrived at Vodak's door. Inside was our army logar.

The great beast was fully equipped with food supply for the march, firearms, and even the oxygenator that would allow him to breathe in the surface atmosphere. Vodak told me that the blood of the logar is similar to a whale's. A chemical readjustment takes place in it which allows the animal to exist in any pressure without deleterious effects.

I shook hands with Dad, Vodak and Mrs. Lawrence. Barbara I took up in my arms and kissed as nearly as we could, enclosed as we were in our glass armor. I'll have to admit that her closeness affected me more than that of a small child.

At my side hung the great sword I had taken from the dead warrior in the subterranean vault of the fish-apes' city. Suspended from its jeweled belt on the opposite side was an Aqualian revolver that Vodak had given me.

Logars are speedy beasts. Their giant hindlegs carry them across the ground beneath the water in great, leaping strides. The front appendages, more like fins than arms, serve to keep their equilibrium, while their massive, whip-like tails act as rudders and secondary means of locomotion. Thus their gait consists of alternating hopping and swimming. They can attain the speed of eighty miles an hour at times, but usually average less over an extended period.

San Francisco lay over eight hundred miles away. Ahead of me stretched as wild and strange a journey as if I had been upon another planet.

IT was not until I was well past Project Number One and was nearing the canyon's end that I began to feel relieved. Pursuit had not developed, for I was well disguised. Vodak had wrapped heavy robes about my entire body such as the soldiers wore in exceptionally cold periods when the bitter Arctic current was sidetracked into their canyon, or when they went on the march into cold climes.

I happened to turn back in my saddle as we reached a little rise in the canyon floor. I had been walking my logar to give it a rest. What I saw turned me cold with apprehension. Not a hundred yards away a five-man squad of Ola's troopers, mounted on swift sharks, was racing toward me!

The leader shouted a command to halt. For reply I goaded my logar to a faster pace, while I reached down and drew my rifle from its saddle-boot.

Dazarks were also fast mounts and had the advantage over a logar, since they could gain altitude rapidly and attack from above.

Glancing over my shoulder, I saw them rising. At the same moment there was a sharp report and a salt pellet whistled by my head so close that my earphones screeched.

The weapons used by seamen underwater were a type of gun that caused the crystallization of the salt in seawater to collect into formidable pellets that proceeded with the speed of bullets. The ammunition was, in effect, self-crystallizing, ever-growing bullets of salt. They planned using the same gun upon reaching the surface in their pressure-resisting armor. On land, in our atmosphere, it would fire a charge of ammonia gas, which reacts with gases in our atmosphere to become deadly, speeding bullets of ice.

The second shot passed through my robe. I had immediately let it fall from my body to allow my arms freer action. I raised the gun to my shoulder and took careful aim. I have always been a good shot with any weapon. Twice I fired in rapid succession. Two of my pursuers tumbled from their mounts and fell screaming through the water.

We were coming into the rocky section of the canyon. My logar's pace was retarded. The sharks were gaining rapidly on us. One of the men

was almost directly overhead when he fired down on me. I felt the impact of the bullet as it ricocheted off my helmet. If my armor were so much as nicked, the horrible pressure of the water outside would shoot a stream of compressed death completely through me. It would not matter where these bullets pierced my diving suit. One nick would be enough.

At the snail's pace we were traveling through the water, it was with great difficulty that I could raise my gun overhead, let alone take careful aim. Two of my next shots went wild. Then the man above fired again. He missed.

I drew Vodak's revolver, hit the shark above me in the belly. He folded up and pitched the rider over his head. I got the man as he floated down.

That left two—the leader and one man. They both shot wild, but I picked off the soldier. The leader whipped his shark around and headed back for Aqualia, turning in his saddle and shaking his fist at me. He was going after more help, I knew. But before long we would be out of the canyon with a good head-start.

MY logar scaled the giant cliff at the canyon's end without once diminishing his pace. He simply leaped up from one narrow ledge outcropping to another until we arrived at the top.

Vodak had furnished me with a little compass and a detailed map, so that I seldom lost my way. But there were long, horrible hours when I was enshrouded in utter darkness after we had left the phosphorescent glow that enveloped the farther regions of the deep about Aqualia. I could only depend on Vodak's assurance that the logar would continue in an absolutely straight line, as far as feasible, just so long as I gave it no other directions with my reins.

In the patches of phosphorescent glow through which we passed, I observed all manner of strange, unearthly creatures that hovered nearby, or peered at us from behind rocks or trees. Occasionally we were attacked by bands of kelp-apes near the black forest. But my rifle always drove them off. However, I gave their ancient jungle city a wide berth, for the memory of my captivity there was still unpleasantly fresh.

I had hoped to spot a glow of the radium searchlight on my bathysphere when we passed through that awful black forest, but there was no sign of it. I was thankful for the gravitational sense that the logar possessed in his relatively undeveloped pineal eye. It enabled him to feel his way along through that forest, though I was absolutely blind for hours.

At last there came the faint tinges of deep violet and blue that marked the boundaries where reached the last rays of the blessed Sun from the warm world above. Nothing ever looked so good to me as those faint rays of hope that filtered down into that watery world. They became increasingly brighter and warmer in color as we ascended the final rise of the continental slope. Then my logar carried me up out of the bay and went hopping down Market Street.

I knew there would be no surer way of gaining attention to myself and the fantastic message of warning that I carried with me. Likewise there was no quicker way to reach Chief of Police Canlon and Admiral Tyler. Both of these worthy gentlemen, in addition to the entire Police Force, half the Navy and three-quarters of the general public were on hand before I had reached Geary Street.

Canlon strode up toward me, looking like a pygmy as I leaned over the side of my huge mount.

"I'm locking you up once and for all, Dan Norris!" he barked. "Get down off that thing!"

His great, shaggy eyebrows were knit into an angry frown. But the reporters and the press were insistent on hearing my story through.

I took Canlon, Tyler and a group of officials to Megler's basement in his laboratory on the bay. Not until then did I get any sort of uniform belief in the weird warning I brought them.

THEY were all assembled around me when I finally got Megler's radio beam working. It seemed an eternity before we picked up any signal

on the sound-concussion reception microphone. It was garbled at first, but finally we heard a clear-cut Aqualian voice.

I wondered if Dad and Vodak had managed to reach the palace and gain control of the radio room. I knew Megler must have marched with the army by now and that Vodak's rebellion would have started. But why the delay in the reception?

At last the Aqualian voice came through. I sighed with relief when he gave his name. It was one of Vodak's men, Saulo. They had got through, all right, and had had a bitter fight with the palace guards. My father was unhurt.

You should have seen the faces of those men standing around me when I spoke that strange chattering language into the microphone and received answers in a similar tongue.

And now at last we heard Dad's own voice.

"Dan, my boy, thank God you are safe! Vodak and I just got into the palace. Ola has taken his personal bodyguard and all the men he can muster to the hydraulic control chambers of Project Number Two. He has kept in touch with Megler by concussion broadcast since they left here right after you departed.

"They were afraid you would get through and warn the surface men too far ahead of Megler's troops. They are scheduled to come out of the bay at any moment! Ola has control of the hydraulic pumps in Project Number Two and will start the city-lowering immediately!"

"Dad," I shouted, "you and Vodak must try to break through and stop Ola. Vodak has several friends in key positions there. You've got to get through!"

Just then the reception was cut short.

A terrific Earth tremor knocked us from our feet. The lights went out. There was a horrible rumble of falling, shattering buildings that came from the downtown section of San Francisco.

Ola had started the pumps. San Francisco was being lowered into the Earth!

CHAPTER XX

The One Chance

THEY believed me then. The show was too convincing to be anything but the truth. If anyone had any doubts, the sight of the Aqualian hordes pouring out of the bay certainly dispelled them.

Thousands of logars were leaping out of the ocean. Aqualian warriors with huge nets were snaring the shrieking victims, dumping them into the pressure-resisting tanks that were pulled along by the alligator-like monsters of the deep.

Before Admiral Tyler or Chief Canlon could get their men into action, before the air forces of the Army and Navy could be organized, these savages from the ocean depths would have disappeared into their watery home. And they would take with them thousands of surface people, grim tribute to a pair of maniacs' wild scheme of eternal youth!

We were on the Oakland Bay bridge, looking down at them, when Canlon shouted:

"My God, Norris, I had no idea you were telling the truth!"

Admiral Tyler kept shaking his head and mumbling in his deep voice:

"We should have listened to you, my boy. This is terrible, terrible!"

I didn't let them stay there long, berating themselves. Each went to his post. In a short while we had hundreds of squads of police, civilians and sailors trying to beat back Megler's invaders.

The part of the city that was over Ola's pumps had sunk about two feet. There was still considerable noise and tremor as sheared-off buildings collapsed into the street, which was filled with fighting, cursing men. The pressure tanks the Aqualians pulled through the streets were being rapidly filled with humans. Everywhere I looked, the husky undersea soldiers were dragging dazed men, women and children up to these moving prisons and dumping them through trapdoors.

I was fighting in a group of civilians at the base of Knob Hill. We were dropping back constantly before the fierce rushes of the Aqualian riders on their Gargantuan mounts when a familiar voice sounded at my shoulder.

"This would be fun, if our guns were worth a hang!"

I turned for an instant.

"Wrench Williams!"

"Hello, Dan."

He had a nasty cut on his forehead and the blood was running down his face, but it did not affect that grin of his. His red, tousled hair looked mighty good to me at that moment.

Wrench leaped for an Aqualian's leg, which was dangling over the side of a mount. He pulled the fellow off, shot him through the head. The Aqualian's body seemed to explode, the tremendous stored-up pressure inside splattering it out through the bullet hole in the armor.

"You've got to press your gun right against their armor before the bullet will go through that glass," Wrench shouted.

"I know it. That's why we're having such poor luck. That glass is made to resist tons of water pressure. Our lighter guns are practically useless against it."

Men were falling fast all around us.

"What are those things they're firing?" Wrench yelled. "They're too blame good with 'em."

"Rifles that fire charges of ammonia gas, which react to our atmospheric gases and become deadly, speedy bullets of ice. But it's their uncanny sight that makes them so accurate."

WE had reached a point on Russian Hill where we could look out over the bay.

"Here come the first of Tyler's planes!" I shouted. "They're heading for the main contingent on the shore below the gate bridge. Megler should be somewhere in that group, well back and out of danger, ready for a hasty submersion."

"Look, Dan, the entire squadron—the ships are out of control. They're falling into the bay!"

"Megler was ready for that," I groaned. "He has special anti-aircraft guns. The gunners are picked for the development of their pineal eyesight, which is phenomenally accurate, anyhow. They line up their sight by gravity."

"You mean," blurted Wrench, amazed, "that their eyes are sensitive to gravitational attraction?"

"Exactly. It's their only means of sight, but it's accurate to much greater distances than is ours. Watch him."

I pointed to a nearby Aqualian soldier, who was taking aim at a fleeing figure that had escaped from a pressure tank that was being pulled into the bay. The man was running along the shore, but the Aqualian easily brought him down with quick aim over a distance of a mile!

"It's that uncanny eyesight that makes their attack so deadly," I said defeatedly. "If it weren't for that—"

I got no further. We had been resting inside a doorway of an old apartment house, halfway up the hill, slumped on the floor. I sprang to my feet.

"Wrench," I shouted, "there may be a way yet to stop them!"

I had suddenly remembered something my father and Vodak had told me. In ten minutes I located Canlon, fighting outside at Headquarters. When I hurriedly outlined my plan, he shrugged his shoulders.

"Do as you please, Norris. If we had listened to you sooner, we'd have had a chance. Now nothing matters."

Quickly I questioned a score of his men. Then I gathered together a dozen young fellows who knew the location of as many major and amateur broadcasting stations throughout San Francisco and Oakland. I assigned every man a station.

"Go to your positions now," I ordered, "and tell the managers that your chief has ordered them to start broadcasting at exactly noon on the shortest wave-frequency the stations can manage. It doesn't matter what they broadcast. Just make noise and plenty of it! Tell them not to stop until further orders. Now get going and fight through. It's the only chance to save San Francisco and our families!"

I gave them half an hour to get

through with their messages.

Wrench, Canlon and I were on top of Telegraph Hill at five minutes to noon. From here we could see the circular section of San Francisco that had started to descend. It was down now to about thirty feet. Part of the main section of San Francisco was included. There were no Aqualians in that area, only the same frantic, despairing men and women like those who had been caught in the Oakland catastrophe.

GOLDEN Gate Bridge was packed with fighting men and women. The Aqualians had trapped them from both sides. Hundreds were leaping out over the bridge into the water below, where they were immediately captured by waiting Aqualians and rushed into the pressure-resisting tanks lined up on the shore.

Canlon, the old, hard, grizzled chief of police, had sunk to the ground. His voice was weary, hopeless.

"It's the end," he said. "The city is doomed. It won't be long before the whole nation will fall!"

We had with us a little portable radio. Wrench had been twisting the dial. Suddenly a bedlam of noise screeched forth, up in the high-frequency section of the dial. It sounded as though every station in the city had struck on the same wave. The noise was an unintelligible, horrible mess of shattering sound.

I grabbed Canlon's binoculars. My circle of vision stopped on a group of Aqualian soldiers who had been fighting on foot halfway up Knob Hill. The expression that came to my face must have been too much for Canlon. He snatched the glasses from me.

"Great jumping—" It was a minute before he could untangle his voice. "They're running around like they were"—his glasses skimmed quickly to other parts of the city—"they are! They're blind!"

Wrench shot a quick, puzzled glance at me. I smiled weakly.

"The Aqualians are blind now, all right," I agreed. "Dad told me in Aqualia how their scientists had been unable to use our method of broadcasting within the city. When they had tried it, everyone in Aqualia went blind for some time. Remembering this gave me the idea that perhaps we could do the same thing by concentrating our radio broadcasts in the shorter wave-frequencies. These oscillations in the ether somehow affect their sense of sight through their gravity-sensitive pineal eye."

"Well, I'll be hanged!" gasped Canlon, completely bewildered.

"Come on, Wrench," I shouted. "There's one person out there in the bay who won't be going blind like his whole army. We've got to get him!"

Canlon drove us down to the bay in his police car, siren wailing dismally. Although I had thrown back my hinged helmet, I still wore my diving suit. Wrench bolted the helmet closed as we bounced around in the back seat.

Everywhere the helpless Aqualian soldiers were being killed or captured by Army, Navy, police and civilians, On one street we skirted close to the rim of the yawning crater, the bottom of which we expected to see far below us. Instead it was not more than ten feet down.

"Dan, it's rising again!" Wrench cried. "That section is coming back up!"

The happy people trapped in there were already scrambling up the sides. Others were shouting with joy, or shaking each other's hands.

"That means Dad, Vodak and his men were able to fight their way inside the pump room of Project Number Two. That will be the end of Ola!"

"Eh?" gulped Canlon. "What are you talking about?"

"You'll find out some day," I promised, leaping from the car as it skidded to a stop off Bay Street.

I RAN past the hundreds of joyful people who were being helped out by eager hands from the mass of abandoned pressure tanks that littered the short beach. I looked for only one man.

There he was, urging his logar down into the sea again!

I scrambled to the back of a nearby logar, shoved the blind Aqualian rider

off its rump and headed for Fritz Megler. He fired several times at me and even kept it up under the muddy water. But he dropped his rifle in his excitement and in a second I had caught up to him.

My arm shot around his neck and I dragged him back up the shore, holding him tightly. All the fight went out of him when we got him into a patrol wagon.

That section of San Francisco which had started down into the Earth could be seen quite plainly, for it never quite came up flush with the surrounding ground.

I finally got in contact with Dad through the sound-concussion set in land and the other swam deeper into the ocean depths, were once again united this time by friendship's bonds.

Wrench Williams and I succeeded in developing a fine business of manufacturing commercial bathyspheres and diving suits. The very first one off our assembly line carried me down again into Aqualia to bring back Mrs. Lawrence, Dad and Barbara.

Fritz Megler died just before I left for Aqualia. He died of infantilism. His growth had been so speedily reversed that when I saw him just before his death, he was nothing more than a tiny, red-faced infant, mewling and crying inside his cradle in a cell in the County jail.

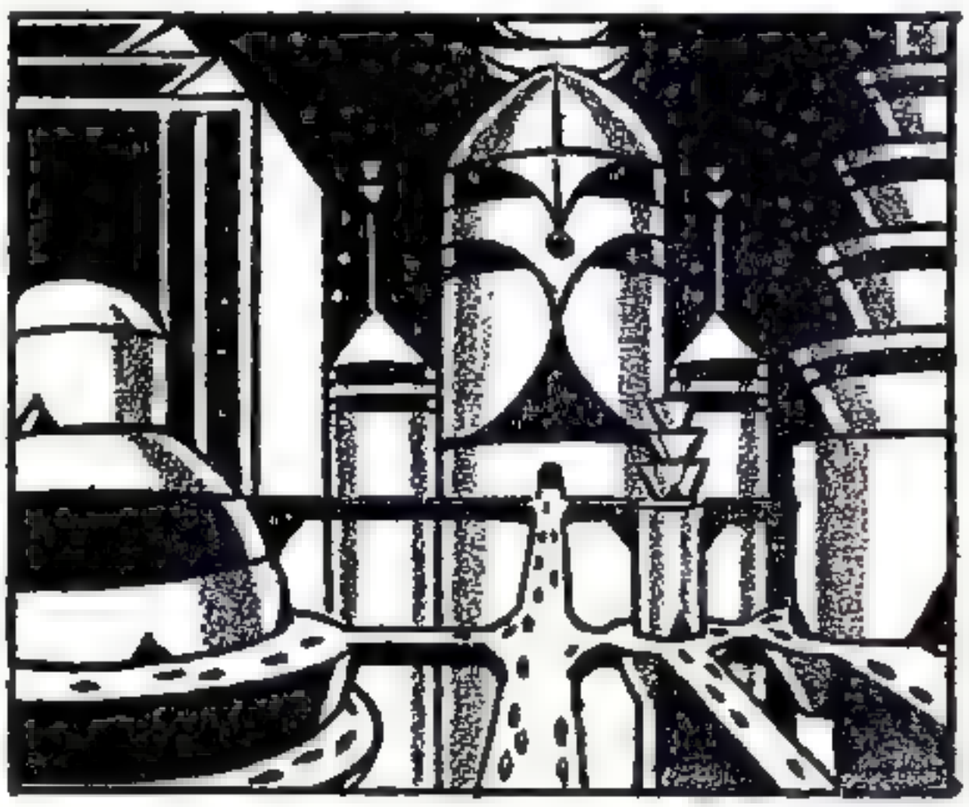
NEXT ISSUE'S HALL OF FAME SELECTION

Meet the Seven Wise Men of Gobi in

THE BONELESS HORROR

By

DR. DAVID H. KELLER



LOOK FORWARD TO THIS CLASSIC OF SCIENTIFICTION!

Megler's basement. The revolution in Aqualia had been a great success. Ola was dead and Vodak had been reinstated as rightful ruler.

We relinquished the Aqualian prisoners of war to a peace party that Vodak sent up, who arranged peace between Terrestrial and seamen. Dad planned to work out a mutual exchange of glandular extracts so that both races could benefit by eternal life and everlasting youth. His Serum X had been perfected within a few months.

And so the two races whose evolutionary paths were separated millions of years ago, when one primordial ancestor crawled out of the sea upon dry

Dad could have saved him with Serum X, but his egomania had developed into actual insanity. The State alienists agreed unanimously that with his greatly prolonged life span, it would be inhuman cruelty to keep him alive. He was hopelessly insane, beyond treatment.

WE soon transported to dry land every surface man, woman and child who had been captured in the Oakland catastrophe—at least all who had survived the terrible ordeal.

Since Dad inoculated himself, Mrs. Lawrence and Barbara with his Serum X, I can see no change in the former two. But Dad worked in his labora-

tory for weeks until be discovered a modification of his serum.

We gathered there when he announced that it would speed up Barbara's rate of metabolism.

Breathlessly we waited as he plunged the hypodermic into her small, chubby, pink arm. Her little face winced, but she merely caught her breath and bravely smiled at me. I stared at her, hoping for what I considered the impossible.

"Nothing's happening!" I complained at last. "She isn't growing or getting older."

Dad grinned, his young features lighting up with cheerful good humor. For the first time his eyes were sparkling, losing the weariness of age.

"Don't be in such a hurry, my son." His grin grew even wider, for it was difficult to believe a man who looked no older than myself was my father, and even he had trouble remembering we weren't the same age. "Within six months she'll have covered the twenty years of normal growth between her present development and her actual age. Then she'll be the same Barbara you knew."

"Will you wait for me, Dan?" she breathed in her childish voice.

I'd have waited the whole twenty years!

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FEATURED NEXT ISSUE

THE GODS HATE KANSAS

A Book-Length Scientifiction Novel of a Future Plague

By JOSEPH J. MILLARD

•

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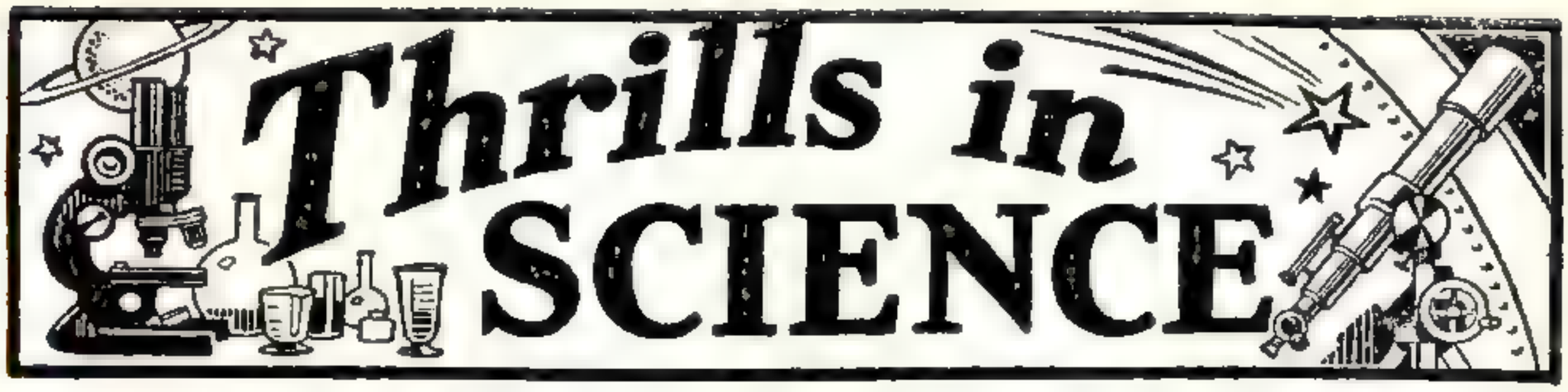


DEALER IN DEATH

ALFRED NOBEL pushed away the batch of newspapers spread out on the desk before him, so that the heavy black headlines became indistinct ribbons of type. "'Killer' Nobel," the press called him. "Alfred Nobel should be banished off the face of the earth," screamed another circulation-hungry editor. Nobel shut his eyes, but the scathing headlines still seared through his brain.

Alfred Nobel thought of the many innocent lives his experiments had sacrificed, and he shuddered. Ever since he had been on the trail of perfecting the treacherous explosive, nitroglycerin, so that civilization could use it safely in the course of mighty engineering projects, his work had snuffed out many human lives. Three years before, even his own factory had been wrecked, at Heleneborg, with the loss of his youngest brother's life.

Nitroglycerin—the most powerful explosive in the world! A mysterious substance. Capable of helping man blast tunnels through incredibly rocky recesses of subterranean soil—and capable of blowing a houseful of human beings to kingdom come in a split second!

Nitroglycerin—the most wondrous of all the energy chemicals known to science. Pour it on a fire and it does not explode. But subject it to the most minute vibration, and it detonates with a terrific violence that enables it to shatter the strongest materials.

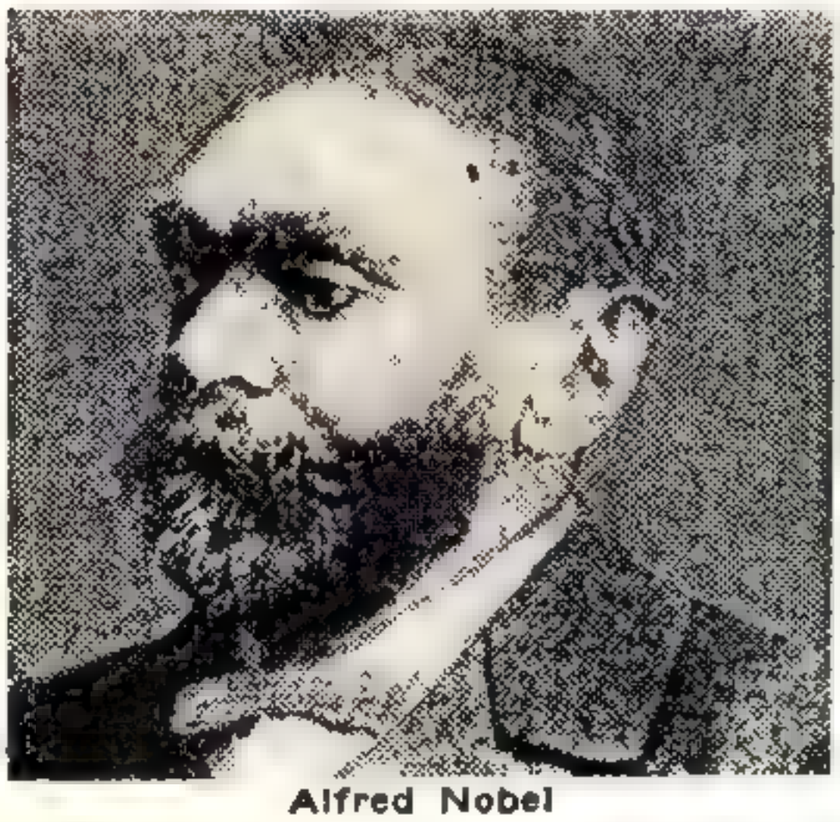
Nitroglycerin—like a curse of old it doomed all who played with it. Incident after incident, attesting to the devastating might of the stuff, flitted through Nobel's mind. He remembered what had happened one very cold night, when a box of nitroglycerin—manufactured at his factory—lay in the baggage room at a railway station. The night became zeroish in weather and the nitro froze. Soon it expanded like water, burst its package.

In the morning an office boy noticed a trickle of yellow liquid oozing from the box. He brought a hammer and nails to fasten the top and stop the leak. The result was an explosion that rocked the building as though an earthquake had hit it, killing thirty people.

The stuff was too hot to handle, Nobel knew. But still he had to keep on handling it, hoping he could discover a safe way of transporting the powerful explosives to the countries that needed it for industrial expansion.

Against his better judgment, Nobel yielded to the demands of various magnates, supplying them with nitroglycerin so that they could build bridges, buildings, subway. And now the newspapers were telling the world about Nobel's traffic in death. A steamship loaded with nitro and bound from Hamburg to Chile had just blown up in mid-ocean. A string of railroad cars had just suffered a similar fate. Death . . . death everywhere . . . each time emanating from Nobel's factories.

But Nobel judged himself too harshly.



Alfred Nobel

He failed to take into account the fact that he himself was risking his own life every moment he stayed near the explosive—sixteen hours a day. The Swedish chemist, stooped in gait because of an injury to his spine while a youth, labored incessantly so that mankind might benefit from his researches.

He knew that in the early days of Rome,

to make a cutting three miles long required an army of thirty thousand men and eleven years of time. He knew that it had taken one hundred and fifty years to mine five miles of gallery in the Harz mountains. He was determined to change all this—so that chemistry would be able to conquer the hitherto impenetrable like a hot blade slicing through butter.

Alfred Nobel stood up, tore the newspapers into shreds. He recalled how sedulous he had been to safeguard the lives of his fellow-workers. How, for a time, he had conducted all his experiments on a floating barge anchored in Lake Malaren. But the newspapers didn't remember those facts. They knew only that Alfred Nobel was a dealer in death, intent on making a fortune for herself by selling an explosive so powerful no way could be found to transport it safely.

The stooped, dejected Swedish scientist walked outside, got into his wagon. The wagon carried a load of nitroglycerin cans and, the way he felt at the moment, Nobel didn't care if they all went off with him around. Well, this would be his last delivery. He'd bring these cans to their destination, then give up this crazy quest for a harmless explosive. He snapped his whip, cracked the reins, and the horse pulling the wagon was off.

Arriving at his destination, the forty-four year old chemist began unloading the cans of nitroglycerin. Suddenly Nobel's eyes became riveted on one of the cans. The metal container had sprung a tiny leak! A tiny leak, yet enough for a thin rivulet of the dangerous liquid to drain out—and fuse with the porous sand in which the cans were packed!

Nobel made these observations in one thrill-packed second. The yellow liquid had become absorbed by the sand! That fact meant his vindication, the answer to all his prayers. With a trembling hand the Swedish chemist reached out and picked up the lump of sand into which the nitroglycerin had spilled. It was hard now—a solid mass! And Nobel knew, in that brief second, that the lump of sand in his hand would unlock the key to the puzzle that had been haunting his consciousness!

Here was the perfect way to transport nitroglycerin, discovered entirely by chance, as though Fate had intervened to prevent Nobel from giving up the ghost. Let the nitroglycerin become absorbed in porous earth. This would make it less sensitive to shock. Then it could be shipped safely—anywhere on earth!

Tears streamed from the Swedish chemist's eyes as he gripped the lump of sand in his hand—the lump of sand that had shown him the way toward inventing the world's first safe explosive—dynamite!

THE MIRACLE MINUTE

THE second hand of Orville Wright's watch ticked off five seconds. . . . He thought of the feats of the dashing Brazilian aeronaut, Alberto Santos-Dumont, who for months had been keeping Paris in an uproar by soaring over the boulevard cafes in a hydrogen-filled dirigible airship of his own design. To ride the billows of the sky as we do those of the sea—the Brazilian had accomplished that incredible miracle.

The second hand of Orville Wright's watch raced on, inexorably. Ten seconds has passed. . . .

The young bicycle repair shop proprietor thought of the birds that flew through the air. He recalled how he and his brother Wilbur had read of the gliding experiments of Lilienthal. They had studied the movements of soaring birds. And they had flown kites. For hours at a time they had lain on their backs spying upon the hawks and buzzards as they wheeled and dipped above them. They watched the winged creatures run swiftly along the ground to get up speed before mounting into the air. The young Wrights studied the rising currents of air upon which these feathered airplanes so frequently glide with no apparent effort for long periods of time. They determined that they would emulate the birds—and build a machine that would keep them aloft—a machine that was heavier than air—not supported above the earth by a lighter gas!

The dial of Orville Wright's watch sped on. Half a minute had passed. . . .

The young inventor thought of the words of the distinguished astronomer and mathematician, Professor Simon Newcomb, who said:

"It is unlikely that man could ever fly. Even if he could by some miracle attain heavier-than-air flight, he would be unable to stop safely.

"Once he slackens his speed, down he begins to fall. Once he stops he falls a dead mass. How shall he reach the ground without destroying his delicate machinery? I do not even think the most imaginative inventor has yet even put on paper a demonstrative, successful way of meeting the difficulty."

Elusive time pushed on. Forty precious seconds had gone by. . . .

Orville Wright recalled how he and his brother had gone to Kitty Hawk, North Carolina, in October, 1900, because the United States Weather Bureau had informed them that the winds there were the strongest and steadiest of the country. On Kill Devil Hill the Wright brothers set up a camp, and on the windswept dunes they began experiments in gliding. Gradually they learned to steer and balance themselves by shifting the surfaces of the planes. Often their gliders carried them above the starting-point and kept them

aloft, soaring over the same place for as long as half a minute. The conquest of the air had begun. Despite the words of Professor Newcomb, the two brothers determined to construct a heavier-than-air

Orville Wright

machine that would move up and through space by the aid of an engine!

The dial of the watch ticked on. Fifty never-to-be-forgotten seconds had winged by. . . .

December 17th, 1903, and the Wright brothers had returned to Kitty Hawk with a machine equipped with a twelve-horsepower gasoline motor capable of giving a speed of thirty miles an hour. Two horizontally placed parallel planes of canvas stretched over light wood frames gave the ascending power. Rudders fore and aft enabled the pilot to steer upward or downward and to either side. The machine was now ready for its test. Would a self-propelled airplane be able to stay aloft in the air, defy the laws of gravity?

Fifty-five momentous seconds had fled by . . . seconds destined to make history. . . .

The first airplane was placed on a platform built on a high sand hill and when all was in readiness the fastenings to the machine were released and it started down an incline. The navigator, Wilbur Wright, then started a small gasoline engine which worked the propellers. When the end of the incline was reached, the machine gradually arose. The plane stayed in the air about twenty seconds.

Fifty-nine seconds had now sped by . . . almost a whole golden minute. And Orville Wright, piloting the plane his brother had taken up earlier in the day, descended to the earth safely. He had hung up the world's first aviation record—852 feet traveled in space in fifty-nine seconds!

Fifty-nine seconds in the air like a bird. Orville Wright's whole being thrilled to the astounding significance of the feat he and his brother had just made possible. Together they had proved that the "impossible" can be attained!

THE BOY WONDER

THE smoke of the battle was thick, and the danger was great. Yet, twenty-six-year-old Henry Moseley, a signalling officer in the 38th Brigade of the First Army stuck valiantly to his post. For the past few months he had participated with the British in the campaign in the Dardanelles. Now here he was at Gallipoli, a member of the Royal Engineers, risking his life to help combat the Germans.

Suddenly there was the sharp whine of a rifle. Henry Moseley toppled to the ground, dead, the bullet from an enemy gun through his head. The first World War had claimed another victim.

Later, a soldier going through the young officer's pockets for identification papers, found a soldier's will that the boy had made on the battlefield. The soldier, not too educated, tried to read the handwritten document.

"What does it say, eh?" came a voice from beside the soldier, one of his buddies.

"I'll read it to you, Tommy," the first soldier said. "'I bequeath all my scientific apparatus and private wealth to the Royal Society for the furtherance of scientific research.'"

"That's odd," commented the second soldier. "I didn't know the bloke was a scientist . . . or that he had any money. I guess it's right what they say about this army being a great leveler. Who would 'ave known we had a scientist in this brigade?"

And so, at the tragic young age of twenty-six, passed out of this world one of the greatest scientists it had ever known. Little did the two soldiers sense the loss to humanity that had occurred when young Moseley was killed at Sulva as he lay telephoning to his division that the enemy was beginning to attack.

But there were many who realized the great loss to science and civilization. The great Millikan summed it up when he said: "In a research which is destined to rank as one of the dozen most brilliant in conception, and illuminating in results in the history of science, a young man twenty-six years old threw open the windows through which we can glimpse the subatomic world with a definiteness and certainty never dreamed of before. Had the European War had no other result than the snuffing out of this young life, that alone would make it one of the most hideous and most irreparable crimes in history."

In 1912, at the age of twenty-three, Moseley had thrilled the world of science with his discovery of the "Law of Atomic Numbers." He gave the world an infal-

lible road map of all the elements of the Universe—a chart based, not on atomic weights, but on atomic numbers. Mendeleeff's romantic blue prints had served science for fifty years. Now a new and more enduring structure was reared, fashioned by the agile brain of youth.

Young Moseley accomplished a great deal more. He declared—and proved—that there had to be at least ninety-two different elements. He left a gap for the

Henry Moseley

then missing number 85 and 87 elements. His work on the X-ray spectra of the elements had settled once and for all time the position and number of the rare earths. It was the achievement of the century.

It is difficult to say what this youthful genius might have accomplished had he lived the normal span of life. Had not that enemy bullet cut him down in the fullness of his powers at Gallipoli, Moseley would undoubtedly have contributed to the great chemical harvest of the last few decades.

The poet, Edwin H. Lewis, in "The Ballad of Ryerson," pays undying tribute to the man who gave the scientific world its great thrill at an incredibly early age.

The beat of the harp is broken, the heart
of the gleeman is fain
To call him back from the grave and re-
build the shattered brain
Of Moseley dead in the trenches, Henry
Moseley dead by the sea,
Balder slain by the blindman there in Gal-
lipoli.

Beyond the violet seek him, for there in
the dark he dwells,
Holding the crystal lattice to cast the
shadow that tells
How the heart of the atom thickens, ready
to burst into flower,
Loosing the bands of Orion with heavenly
heat and power.

He numbers the charge on the center for
each of the elements
That we named for gods and demons, col-
ors and tastes and scents,
And he hears the hum of the lead that
burned through his brain like fire
Change to the hum of an engine, the song
of the sun-grain choir.

Now, if they slay the dreamers and the
riches the dreamers gave,
They shall get them back to the benches
and be as the galley slave.

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PRISONERS IN FLATLAND

By FRANK BELKNAP LONG

Author of "Two Against Neptune," "Red Moon," etc.

Rod and Janet leaned over the edge of the asteroid and stared down into space

Against the Back-Drop of the Starry Void, a Mighty Drama of Human Struggle Is Played Out in the Asteroid Belt

ROD DRAKE leaned over the edge of the little asteroid and stared down into space.

"All clear," he said, with an upward jerk of his head.

On the projecting ledge behind him Janet Wayne nodded. It was hard for her to realize that they were using tiny worlds as stepping stones in the rocky, dim zone of the asteroids. Fleeing from tiny world to tiny world as swiftly as they dared, using magnetic swing lines in lieu of thousand-league boots, and perilously dodging the pale tracer beams of the Interplanetary Patrol.

The man and the girl were staking their lives on a desperate gamble for freedom. In that interplanetary Sargasso of thickly clustering asteroids between Mars and Jupiter the Patrol's pursuit vessels could neither land nor

take off. The magnetic stresses were too intense, the orbits of the little worlds too erratic and unpredictable. Hence, like deep-keeled ships skirting a cluster of uncharted shoals, they circled warily about, remaining within cruising radius of Drake and his companion, but not daring to enter this section of the Asteroidal Belt.

This fact increased the fugitives' chances, but Drake was too much of a realist to minimize their peril. He knew that once they were illumined by tracer beams they would become targets for a livid stream of sear-projectiles. The Patrol ships could blast from all directions simultaneously. It did not matter that some of them were forty thousand miles away. The lenslike action of tracer beams enlarged images across the void, and sear-projectiles could cross space with the speed of light.

Tracer beams had been playing all about them for several hours now, etching the outlines of neighboring asteroids against the void, and crisscrossing far out in space. Drake and Janet had agreed on their next step, but had been compelled to wait for the tracer beams to leave it. It was a very flat asteroid, a sort of metallic wafer wheeling in a sluggish orbit about the quarter-mile-long rock on which they crouched.

Right now it was spinning directly beneath them. Drake had studied it through binoculars, but he hadn't told Janet what he had seen. She trusted him implicitly. He didn't want to get her hopes up only to dash them. He couldn't be *sure* that he had seen—a lake!

There was enough solidified air cubes in their oxygen filters to last them a week, but since leaving the penal colony on the massive iron asteroid, Auriga, they had drained their canteens dry. They needed water badly. But water without atmospheric pressure was too incredible for sane belief. How could water exist on an airless, wafer-thin asteroid in space?

DRAKE pivoted about on his knees. "It's now or never," he said. "The beam has shifted a hundred miles farther out."

Her little hand, cold even through her mitten, tightened about his fingers. Above her flaring nasal filter her eyes met and held his gaze while light from his headlamp haloed her jet black hair.

"Poor Rod, poor boy," she whispered.

"Poor Rod nothing," he grunted. "We're not licked yet."

He stood up on the projecting iron ledge, his tall body silhouetted against the void, steely muscled and lean, with broad, straight shoulders. He was dressed in a convict's crumpled suit of gray space rubber, but the ill-fitting garment did not detract from his dignity. On his breast was a number—C 562, Auriga Penal Colony.

It was supposed to be a badge of guilt, but he wore it proudly. Like the girl by his side he had committed a political "crime" which a more enlightened social order would have adjudged an act of heroism. Long months of imprisonment on Auriga had failed to break his spirit or alter his convictions. Despite the constant vigilance of brutal guards he had finally won through to freedom, taking Janet with him.

It was a precarious sort of freedom—with death staring them in the face on every stepping stone. But was not all freedom precarious? Drake's ruggedly handsome face set in grim lines as he turned back to the edge of the little asteroid, raised the drum of his magnetic swing line and stood waiting for the girl to take her place beside him. There was no need for further words between them.

He hurled the drum straight out into the void and leaped downward from the ledge, his arms outflung. He descended like a plummet, the magnetic swing line drooning above him as it unwound. Caught in the gravitational vortex of a dozen tiny asteroids the drum revolved like a top, releasing a thousand feet of magnetized swing line and then slowly descending.

From far below Drake controlled the drift of the floating, windlasslike instrument by directing a continuous barrage of gravity-neutralizing negratons upward from his belt instrument, increasing the mass of his own body as rapidly as he dared. On the asteroid he had weighed only a few pounds; now his gravity stabilizing belt suffused him with a leaden density as it hummed into high. The blast tube was leaping

in his hand when Janet swung close to him, her body dangling at the end of her own thousand feet of gleaming swing line.

"Darling, are you all right?" she shouted.

He jerked his head up and down. "Janny, I forgot to warn you. If the tracer beam swings back, *cut your line.*"

"Rod, are you mad?" she shouted back. "We'd go shooting off into space. How could we keep ourselves warm without a magnetic base for our aura lamps?"

"We couldn't. But I'd rather freeze than be blasted."

Janet was silent for an instant. She was drifting slowly away from him, her body revolving in the misty swath of radiance from his headbeam when her voice came clear and bell-like across the void.

"So would I, Rod. If they catch us in the beam I'll know what to do."

Drake shivered. He was beginning to feel cold already. The tiny lamps studding the heels of his solar boots could only give off radiations upon contact with metal. The terrible cold of space was dispelling the lingering aura which still enveloped him. He could only hope they would reach the wafer-thin asteroid before the heat aura vanished completely. Far out in space the crisscrossing tracer beams glimmered menacingly, spanning a third of the heavens and enmeshing the dimmer stars.

IT was curious how bell-like their voices sounded. The old physicists hadn't known that sound could be conducted by magnetic wavicles through the airless ether. There were many other things the old physicists hadn't known.

He was thinking of them now as he descended toward the wafer-thin asteroid. It had never occurred to them that men could stand the rigors of space clothed in simple, loose rubber garments, with nothing but ascending heat auras to protect them from the cold and gravity-belts to modulate their density.

The old visionaries had talked about metal space suits and clogging oxygen lines when all a man needed was a tube filter fitted into his face plate. How little they had dreamed, back in the twenty-first century, that two people could stand alone against the Solar System and use little worlds as stepping stones in their flight across the black night of space. Eliza crossing the ice, twenty-third century fashion.

"Rod, I've grazed it. I've grazed it with my toes. But I can't seem to blast down to it," Janet's voice came to his ears.

"Steady, girl. Keep aiming at the drum, and increase your density a little."

As he spoke his own feet grounded. He was jerked along erratically for several yards and swirled into the air again. Swiftly he increased his density, gazing down as he did so.

The surface of the wafer-thin asteroid was as smooth as glass. The light from his forehead lamp streamed over a polished, gray terrain which mirrored his floating bulk and the slowly turning swing line.

The gleam hurt his eyes. He gave a nervous little laugh and braced himself for the jolt of crashing down upon that incredible flat surface scoured clean by meteor dust. Weighing over three hundred pounds, he thudded down heavily, the swing line descending in loops about him. He rolled over on his side and clicked his gravity belt into reverse.

He stabilized it the instant it reduced his gravity to one hundred and sixty pounds, his normal Earth weight. He hoped the belt wouldn't clog. He was haunted by a fear that it would. It was not a perfect protection, for the subelectronic energies which flowed from it permeated him incompletely when the inter-asteroidal magnetic stresses became too intense. Yet he knew that without it he would have bounced about like a rubber ball, his body weight reduced to a few pounds by the little asteroid's negligible mass.

Something was making a grinding, crunching sound close to him in the darkness. He sat up and stared in amazement at the drum of his magnetic swing line. It had descended a few feet away and was now spinning about like a top. Suddenly it stopped.

Puzzled, he grounded his solar boots firmly. From a dozen tiny aura lamps warmth billowed up, enveloping him in a tingling glow. Concern for Janet's safety was paramount in his mind. He was getting swayingly to his feet when a voice came out of the ebon stillness.

"Rod! Rod, where are you?"

His heart leaped as he answered. There was a rustling in the darkness and she came stumbling into the light from his headbeam like a frightened child, dragging the drum of her magnetic swing line behind her. They embraced fervently, and Drake wished he could kiss her. There were still certain disadvantages to space exploration.

"ROD, I'm scared," she whispered.

"Keep your chin up," he said. "We've surmounted the worst hurdles."

"But that's just it. We—we haven't. We're fleeing blindly. Oh, I know there's supposed to be a refugee colony somewhere in this maze. But do you honestly think we'll ever find it? The Patrol can't, and they've been trying for years. If we had a chart, something to guide us, we might win through to it. But what are the babblings of convicts worth? Has anyone ever reached the Asteroid of Lost men, and returned to boast?"

"Steady, Janny. If a condemned man found that haven wouldn't he stay there?"

"Desperate, hopeless men are always conjuring up legendary havens, Rod," she murmured. "What evidence have we that the haven exists? Rod, I can't swallow. My throat is on fire."

"A parched throat is just an inconvenience," Drake said quickly. "We're not dehydrated yet. Before thirst gets in its body blows we'll have plenty of warning."

He was lying to reassure her. He knew they couldn't go on much longer. He decided to tell her.

"You may as well know now. When I took telescopic bearings I saw something that *looked* like a lake on this asteroid. That's why I was so set on getting to this way-station fast."

Janet's pupils dilated. She stared at him incredulously, swaying a little.

"It may have been a space mirage," Drake went on. "But if it's really an oasis, there'll be no stopping us."

"It's unbelievable," Janet gasped. "A lake would freeze solid and fly off into space."

"According to the physicists," Drake qualified grimly. "There are special conditions which can turn natural laws on their heads. The zone is not a textbook world and never has been. Hold on to my arm, untie your swing line, and keep close to me."

Together they advanced through the darkness, the light from their headbeams streaming out before them.

Above them arched the gigantic, discoidal system of stars and vaporous nebulae which comprised the Milky Way, rotating round its center in Sagittarius fifty thousand light years from the solar disk. Far to the east of them arched the Magellanic Clouds, torn off phalanges of that mighty parade of globular star clusters, eclipsing binaries, comets, gaseous opacities, and cold planets, dwarfing them to utter insignificance as they trod the iron surface of this gnat-sized world.

They were not two against the Solar System now, but two against the whole of space. And yet they felt superior somehow to all that vastness, carrying within themselves a heritage unique. The heritage of protoplasm, daring from the first, surging upward from amoeba to man and fathoming at last the inner secrets of Time and Space.

They were prisoners fleeing, they were human beings pitted against vastness, and they were two in love and unafraid. Thus they epitomized the human race—frustrated, r e c k l e s s, wretched, joyful, thwarted by circumstances beyond their control, but determined to win through to happiness at last.

Janet saw the lake first and stopped dead in her tracks.

"Rod, look there!"

She swayed against him, pointing. Drake's heart leaped. A silvery expanse was unmistakably just ahead of them, flickering in and out of their merged headbeams like a luminous shadow. Breathlessly they advanced toward it, their solar boots clumping on the asteroid's iron crust.

They did not stop to marvel, but fell

gratefully to their knees, splashing wetness through their opened face plates and quenching their thirst in greedy gulps. The water was cold, with a slightly bitter taste. Satiated, they arose and fastened their transparent visors and drew close to each other, staring down in awe at the little lake.

IT was perfectly circular, not more than forty feet in circumference, and so crystal clear that their headbeams pierced to the bottom of it. It seemed to have been scooped out of the asteroid's metal surface. The basin was a sunken half-sphere, perfectly symmetrical, and unmarred by erosion or under-water clefts. No ripples stirred the little tarn's gleaming surface, and there was no hint of vegetation in its depths.

"I—I can't believe it even now," Janet gasped.

"It can't be true H-Two-O," Drake said. "But it's enough like water to quench our thirst."

Janet shuddered suddenly, and clutched Drake's arm. "Good heavens, Rod, what was that?"

Her companion stared at her in consternation. "What are you talking about, Janet?"

"Something moved behind you just then. Like—like a flitting shadow."

Drake straightened in sudden alarm. The thought which came to him appalled him so that he began to tremble. In the zone of the asteroids space madness wrought its direst havoc. It came on insidiously, subtly twisting and warping the strongest minds, and it started with simple hallucinations, vague fears.

He raised his eyes and stared at her, an unspoken question in his gaze. She stared back unflinchingly.

"No, Rod," she said. "Look at my eyes. There's always a film, a blurring. I'm as sane as you are."

Unutterable relief choked Drake's throat. He lowered his gaze and spoke slowly. "If you thought you saw something stirring, forget about it. Don't hang out a signal light."

"What do you mean?"

"Unless you're *positive*, concentrate on something else. The Patrol issues a manual to raw recruits, warning them against *shadows in space*. They're deadly in the zone. It's like hanging out a signal light: 'I'm just waiting here for madness to clamp down.'"

Janet smiled wanly. "I—I think I understand."

"Good girl."

As he spoke Drake unstrapped his portable communicator and swung it across his knees. He clicked on the capsule current and twisted the dial to Astroidal short wave. There was a sudden, vibrant hum. A milky opacity filled the screen and coalesced into the misty outlines of a tall, broad-shouldered patrol officer. The pickup was out of focus. Drake turned the dial the barest fraction of an inch, glancing at Janet as he did so.

"It's one of the commanders," he said. "I can see the neon hawk on his breast."

The officer's face became crystal sharp, his lips moving in staccato speech.

"It is imperative that we go in after them. Commander Malfroy is asking for volunteers. Conditions are not favorable for a sortie, but the traditions of our service demand—"

Drake clicked off the communicator with a snort. "Crazy fools! They'll risk the lives of a hundred brave lads just to capture us. I never heard of such a determined pursuit."

"Rod, do you think they *can* come in?"

"They can try. If they use one of their thin tonnage cruisers—"

HIS speech congealed, and he stared.

The thing was standing directly in the light from his headbeam gazing down at them. Its outlines were startlingly human, but there was a stupefying aberrancy in the way it was formed. It had length and breath, but scarcely any thickness. When it swayed a little sideways it thinned like a paper figure standing there, its torso crinkling.

Its face was a repulsive mask, depressed and shriveled. Almond-shaped eyes glittered malevolently above a flat, triangular nose and a mouth that was a thin, straight line. Its metallically gleaming body was undraped and perfectly flat. Even its toes did not

project, but extended downward, increasing its height by several inches and giving it the aspect of a shadow-show ballet dancer silhouetted against the void.

It remained for an instant silently regarding them, undeniable malevolence in its gaze. Then, abruptly, it vanished.

Janet went dead white. She clutched Drake's arm, her breath coming fast. "*That* wasn't a shadow, Rod."

Above the lakelet Drake crouched rigid, too stunned to give expression to the thoughts which were exploding in his brain.

"That wasn't a shadow," Janet reiterated. "It was alive. There is life here, Rod. A ghastly travesty of life such as we know. Rod, that thing—"

"Easy, Janet. It didn't harm us."

"It seemed to want to," Janet cried out. "It looked evil—hostile. Rod, what can it be?"

"I don't know. It looked vaguely human, but it's probably some sort of animal. The freakish thinness of this little world must have influenced the course of evolution here.

"But, Rod, how could it live and breathe and absorb nourishment with no depth to its body?"

"It seemed to have a little depth." Drake's voice sounded tight. "You've got to remember that biological adaptations can be unutterably grotesque. There are deep-sea fishes just as flat, with wafer-thin internal organs."

He took a deep breath. "You've got to remember that the first Martian colonists went through an ordeal just as harrowing. Suppose you saw a red desert clabrin for the first time, its hood pulsing. You'd scream and then your throat would close up. But a fanged clabrin's bite is no worse than a mosquito's."

"There was no mistaking the malice in that face," Janet declared. "And there may be hundreds of them out there watching us.

She gestured toward the darkness which seemed to pulse outside the sharply defined illumination from their headbeams. Although it was filled with sparkling meteoric dust it was sufficiently opaque to obscure a part of the lakelet and cut down the glow from their lamps a few feet from where they were crouching.

Drake unstrapped his canteen and lowered it into the water. Bubbles flowed up and broke beneath his hand.

"Under happier circumstances I'd camp here indefinitely," he said. "The fauna of an asteroid would stir the pulses of any man with a normal exploratory bent. But biological research is out. We've got to keep moving."

"You mean everything that matters in life is out—for us," Janet exclaimed bitterly. "We're not privileged to explore and dream and hope. What have we done that we should be hunted through space like animals?"

"Other well meaning people have been hit even harder, Janet," Drake said soothingly. "Absolute justice never existed anywhere in Time or Space."

They arose together and stood for an instant beneath the glimmering constellations, their bodies touching.

"You mean we've just got to grin and bear it?" she asked.

"That's it," Drake said. "Without any help from anyone." He drew himself up. "We'll pick out another waystation. Keep close to me and watch your step."

Cautiously they advanced through the darkness, their solar boots clumping on the asteroid's smooth crust. The little lake receded and was lost to view as they moved with slow, hesitant steps into the unknown.

* * *

PATROL Commander Malfroy stood staring into the tracer beam magnification disk, his face drained of all color. Beneath his feet the deck of the thin tonnage cruiser *Eridanus* was vibrating steadily. Through the quartz port of the control room the glare of flaming rocket jets illumined his bowed head, etching his thin, hawk-featured face against "ancient night and chaos."

The thing that was happening in the small magnification screen was unutterably terrifying. The two fugitives just limned by the tracer beam were being buffeted about by something which was alien to his experience. Commander Malfroy was cruising in to this section at the risk of ship and life, but neither by word or motion had he

signified his intention of destroying the fugitives. He had released no sear-projectiles, and yet the fugitives' garments were in shreds.

Drake had been knocked down a dozen times and the girl was bruised and bleeding. Drake was keeping his body between her and that weirdly multiplying shadow, weaving about with his fists flying.

The shadow which was attacking them was constantly splitting up into a dozen simulacra of itself which wavered in columns along the edge of the wafer-thin asteroid and leaped suddenly in upon the fugitives. Even as they leaped they coalesced into a solitary shadow again, which struck Drake a glancing blow and darted backwards like a snake.

First Officer Hemingway, who was standing at the commander's elbow, spoke hoarsely.

"It's as though—as though that thing had been cut out of a folded piece of paper. You know what I mean, Skipper. You fold a paper eight or ten times and cut out a figure. When you open it up you have a lot of paper men which can be folded back into a single figure again."

The commander swung about, his jaw tightening. "Blast out the emergency rocket torps, and get me Jackson on the intership coil."

"Yes, sir."

A half minute later Commander Malfroy was speaking to his short wave operator in the control room's visiplate. "Jackson, Drake stole a regulation Patrol communicator from one of his guards. If it's tuned in on Asteroidal short wave you can start the capsule current by flooding the pickup chamber with an Emergency call. If you can establish contact, ask him—ask him how long he can hold out."

"Aye, aye, sir."

The operator's face vanished, and a milky opacity filled the screen. The commander swung again to the tracer beam magnification disk.

Across ten thousand miles of space the struggling images of Drake and the attacking shadow passed through a lenslike swath of light which enlarged them in pulsing wavicles across the void. The shadow's arms were perfectly rigid. It did not strike out with its fists, but darted about erratically, smiting Drake hip and thigh.

When it turned sideward it became a thin line leaping and when it divided in silhouette a hundred filaments seemed to be dancing at the asteroid's rim. One instant all the simulacra would come rushing at Drake together, like soldiers falling into single file and charging headlong into battle. The next they would rebound and go shooting off in all directions.

Drake's face was cruelly battered, his right eye swollen shut. Behind him could be seen the iron surface of the asteroid and the crouching figure of Janet Wayne, her features distorted with horror.

A SUDDEN, dull thud resounded from the audiovisiplate. Startled, the commander turned to see the short wave operator's head and shoulders filling the opalescent screen. The operator had a portable communicator strapped to his chest.

Drake's voice issued sharply from that screen within a screen. "Can you hear me? Can you hear me? Is my transmitter—"

The commander's eyes glitted. "We can hear you, Drake. This is Commander Malfroy. I'm speaking from the control room of the I.P. Ship *Eridanus*. We're coming in after you. Can you keep that—that thing at bay?"

"I don't know."

"What is it, Drake? Of all the ghastly—"

Drake's voice rang out in sudden, bitter challenge. "It's no more ghastly than Dry Auriga, Commander."

"Drake, we're coming in. If you can hold out for another fifteen minutes we'll smash that thing. I've blasted out the emergency torps."

"I don't think—I can—last that long," Drake panted. "You *can't* smash it, Commander."

Before Malfroy could reply another dull thud came from the communicator. It was followed by a woman's shrill scream.

"Drake, what was that? In heaven's name—"

Jackson interpolated in alarm. "Drake? Drake, can you still hear us?"

After a moment Drake's voice came again, thick with pain. "It broke—my left arm. I'm afraid we're—done for, Commander."

"My orders are to bring you out alive!"

"You'll never—do it—now. It's not—an animal."

"Drake, what is it?"

"I think—it's an intelligent, magnetic—mineral. I think we—attract it—magnetically. We found a lake that it—hovered about. Now it's coming at us because—we drank—some of that water. We've become magnetic poles."

The commander could sense that Drake's brain was fagged. He was babbling deliriously now, talking more to himself than to the stunned men in the *Eridanus*.

"I should have known when my swing drum spun about. Energies here are terrific. We're on—a strong field asteroid. It strikes—like sheet lightning."

A harsh crack jarred the commander's ears. Drake's voice rose in agonized despair.

"It must suck energies—from that lake! That lake must be a recharging medium polarized by ferromagnetic molecules. Energized water! That's why it couldn't freeze. Evolving energies here—strange life—not protoplasmic. Strange energy—splitting it as it strikes. It's multiple—like a vector screen. Can't destroy it. We're done for. Just as well, perhaps. Janet won't have to go back—to that hell."

For a moment the commander felt beaten. He stood gripping the navigation rail which divided the control board and its accessories from the inter ship coil, meeting Jackson's startled gaze in utter silence.

From the babblings which had come to him his mind had built up a more appalling picture than the one which was flickering in the magnification disk. Ten thousand miles away—no, five thousand now—the man whom he was sworn to bring out alive was struggling with an alien form of life which was apparently indestructible.

Malfroy felt sick at the stomach. A blow like the one which had broken Drake's arm might kill him at any moment. Then the commander straightened suddenly, a dawning hope driving the despair from his features.

Swaying a little, his knuckles chalk white, Malfroy barked at his short wave operator.

"Jackson, get me the rocket room. Keep your communicator open, but block in Ensign Willis on this screen."

JACKSON obeyed, a startled look in his gaze as his image dimmed and vanished. From the milky opacity which filled the screen another face emerged, that of a pale young man in a white uniform, the rocket room's corrugated bulkhead looming behind him.

"Ensign," the commander directed, "listen carefully. I want you to align the capsule of the Gierson de-magnetizing ray with the image in the beam magnification disk. You'll have to compute your firing capacity carefully. Include the entire asteroid, but bring the trigger to bear on the edge which projects toward us.

"Try to hit the shadow. Use a measured blast at first, but increase the rotation if you have to. *Ensign, I want you to de-magnetize that shadow.* Do you understand?"

The young man nodded grimly. "I'll do my best, sir."

"All right, snap into it. Is your auxiliary magnification disk perfectly clear?"

"It is, sir. We've been watching Drake and that thing trade blows. He can take it, sir. Every man jack aboard this ship is rooting for him."

"Never mind that. Snap into it!"

"Yes, sir."

The commander looked down at his hands and frowned. His hands were trembling like a raw recruit's. It was as humiliating as the devil. He swung back to the magnification disk and stood staring at the far-off, valiant man whom he was pledged to bring out alive.

Drake was still on his feet. He was reeling like a drunken man, but he was still fighting. The commander thought of the iron asteroid Auriga and what the overseers did to men like Drake. They tried to break the spirits of men like Drake.

The commander suddenly did an incredible thing. He blinked moisture

from his eyes and muttered: "Damn them to Hell!"

The de-magnetizing ray streamed out across the void. It was scarcely visible above the brighter glow of the tracer beam, but Malfroy could tell that it was streaming out by the way the images flickered on the magnification screen.

The shadow had ceased to dart about. It was reeling drunkenly at the edge of the asteroid, no longer multiple, a wilting, thin shape with buckling knees and arms that projected straight out. Suddenly a convulsive shudder passed over it. Its arms dropped and it went staggering over the rim to fall like a crisping leaf through the void, twisting and turning until it was lost to view in the icy blackness of space.

The commander mopped sweat from his forehead and leapt toward the visiplate. A moment later he was shouting orders in the opalescent screen to the first officer whose face was as white as his own.

"Cut down the acceleration and let her coast. Use your own judgment about the vanes, but order the boatswain to stand by. We're lowering the air boats the instant we weight in."

"Yes, sir. Are you going ashore yourself?"

"I am, Hemingway. In the first boat."

EIGHT minutes later a landing party of nine grim-faced men were clambering over the rim of the asteroid, Commander Malfroy at their head. Drake was standing straight and still at Janet Wayne's side, his left arm dangling. Beneath the constellated sky he waited, bruised and shaken, with a ribbon of crimson trickling from his mouth.

But he did not look beaten. A calmness had returned to him, a quiet strength. He smiled as the commander drew near and extended his unbroken arm. There was no mistaking Drake's intent.

C 562 was not offering his hand in welcome but was making, quite simply, a gesture of surrender.

"All right, Commander," Drake said. "You can put on the links. We've reached the end of the present course, I guess."

The commander nodded. But he did not reach under his service coat for a circlet of metal. Instead, he took Drake's hand and clasped it warmly.

"We've got to get that arm attended to right away," he said. "We've had battle-scarred men in high government posts before, but if you can start in physically fit you'll stand the strain better."

For an instant it seemed to Drake that his ears must be playing him tricks. He stared at the commander blankly, his lips twitching. Malfroy explained.

"Drake, there's been a political shake-up on Earth. The things you and Miss Wayne fought for now seem pretty fine things—to most of us. They've elected you Vice-President of the Federated Republics of the World."

He smiled wryly. "That's why I came in the zone to bring you out. I was determined that nothing was going to stop me."

Drake felt suddenly that all of his senses were playing him false. Janet Wayne had never seemed so close to him or the stars so blazing bright. She was closer than breathing, locked tightly in his good right arm, and high in the black void the stars were singing together.

The commander coughed. "I suppose you'd like to kiss her, lad. And that arm has to be attended to, remember. So let's go into the *Eridanus*."

●

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DEATH FROM THE ★ STARS ★

By A. ROWLEY HILLIARD

Author of "The Avenging Ray," "The Island of the Giants," etc.

GEORGE DIXON was struggling wildly amid a great conflagration. Fire burned his body, blazed before his eyes, roared in his ears. For frenzied hours he struggled, wondering vaguely why he was not consumed. . . .

He awakened with a start, recognized his own bedroom and realized in amazement that he had been dreaming. But that burning sensation in his body did not cease. Neither did the bright flashes of light before his eyes, the roaring in his ears. In fact, these sensations were ten times stronger now than in the dream. His limbs twitched convulsively under the covers.

"Must be sick," he muttered. "Nerves a bit frazzled lately. Overwork, perhaps. No, it can't be that. I couldn't give up my work now!"

He rolled over and groaned. He felt ill, but it was still night. In the morning he'd probably feel better. He had to! If he were sick, he wouldn't be able to watch his little block. He was worried about it. It had constantly been getting smaller and crumbling. Instead of growing, it was shrinking away. He couldn't understand that, couldn't see where it disappeared to.

For an hour he tossed uneasily in bed. Although his bodily discomfort was steadily growing, that was not what occupied his mind. He was worrying about the little block down in the laboratory. If he could make sure it was all right, he might get some sleep.

He threw back the covers, swung his feet to the floor and stood up. Uttering a low, agonized cry, he swayed dizzily and leaned against the wall for support.

"Something is wrong!" he moaned.

His voice sounded strange and high-pitched in his own ears. He found the light switch. The journey down the stairs was long and terrible. He held fast to the banisters, taking one step at a time. Ordinary muscular coordination seemed to have deserted him. Each movement required a mighty effort. He could not last long.

Reaching the foot of the stairs, he staggered to the laboratory, burst in and switched on the light. He gave a hoarse shout.

The laboratory was a large, square room, with long windows on two sides. Against the walls were set lead-topped tables, littered with tubes, retorts and various electrical devices. But it was toward the center of the room that George Dixon stared in horror.

On a small table, under a bell-jar, lay a little heap of black dust, nothing more. Yet George Dixon was astonished and terrified. He knew that only yesterday there had been, under that jar, a pretty fair-sized block, composed of his "life forces." Now it was gone. Where?

"Things have to go somewhere," he told himself.

The jar was sealed tightly to the glass plate beneath, yet there remained only black dust. Dixon knew what that was.

HE laid his hand on the glass. It was warm, but not hot. His eyes wandered around the room, then became fixed upon a grotesque object on the window ledge. It was—or, rather, it had been—his geranium plant. Now the leaves were a dead black. As he watched, one of them

EDITOR'S NOTE

Some stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "Death from the Stars," by A. Rowley Hilliard, has stood this test, one of fantasy's prominent fan-journal editors, Mr. Robert W. Lowndes, has nominated it for SCIENTIFICTION'S HALL OF FAME.

In each issue, for several forthcoming numbers, we will reprint one of the most outstanding fantasy classics of all time, as selected by our readers.

We hope in this way to bring a new prominence to the science fiction gems of yesterday and to perform a real service to the science fiction devotees of today and tomorrow.

An Outstanding Story Nominated

Over the monstrosity that had been George Dixon he poured a gallon of the gasoline

dropped off and crumbled to powder on the floor.

Dixon drew his hand across his eyes. Something was happening, something he could not understand. He must try to think, but it was almost impossible. His mind didn't seem to work right. It kept wandering. He wished Julius Humboldt were there. Julius would help him.

He stared at the geranium plant. Even the stalk was black. It was crumbling away, as his little block had crumbled, but that didn't make it any easier. No, he couldn't think. If only Julius were there!

He remembered what Julius had said when they had last talked together. Humboldt had come to visit him, which was an unusual occurrence, saying that he was interested in a proposed experiment Dixon had mentioned in a letter. George Dixon had explained cautiously his intention to explore for life in substances deposited on the Earth from outer space.

"What is life?" Humboldt had asked abruptly.

George remembered laughing, then muttering something about assimilation. But Julius had a way of asking unanswerable

for Scientifiction's Hall of Fame!

questions and then answering them. He said flatly:

"Life is a disease."

"Disease?" George had exclaimed.

"Exactly. A disease or corruption which afflicts the stagnant matter that spreads over Earth. This planet's matter is very low in energy. It is cooling, disintegrating, and you and I are the crawling, writhing maggots of its decay."

"That's horrible!" Dixon gasped. "Preposterous!"

"Horrible, perhaps, but not preposterous. We say that life cannot exist upon the Sun. Why? Because the Sun is too hot for it. What does that mean? Merely that the Sun has the protective energy to purge or sterilize itself of such 'life' as we represent. Place a needle point in the flame. There you have the same sort of sterilization on a small scale."

George Dixon had been slightly indignant.

"That may amuse you, Julius, but I fail to see how a disagreeable interpretation like that can have any practical value."

"They might serve as a warning to such as you."

"Warning?" Dixon blurted.

"Yes. If I understand your motives correctly, you want to explore for life in meteoric substances. Since they consist of matter in a very low state of energy, and because mere cold is not always fatal to life even as we know it, I believe you will find what you are looking for."

"Well, I'm glad to hear that," Dixon said, grinning. "It makes you practically unique among scientists."

JULIUS' face remained grave.

"But I am far from believing that you are wise in attempting it," he concluded. "When you find it, what then?"

"What then?" repeated Dixon, baffled. "I don't understand you."

"Well, do you expect it to be identical with some form of life we experience on Earth?"

"Not necessarily."

"Probably?"

"No," Dixon said thoughtfully. "I should say that the probability points in the other direction. Life is a product of its environment. It would be a remarkable coincidence if this hypothetical alien life had developed under conditions identical with those on Earth. My theory is that some such life may exist in meteoric substances in a state of suspended animation, induced perhaps by lack of heat and most certainly by lack of food. To put it briefly, I intend to test for its presence with a variety of temperatures and a variety of foods."

George remembered that Humboldt had nodded absently. There had been a strange look in his heavy eyes as he asked quietly:

"And are you not afraid?"

Dixon shuddered now as he lay back in his chair. He felt dizzy and sick. Yes, he was afraid now, but then he had merely said:

"Afraid of what?"

"Good Lord, man, don't you see? You have just admitted that you expect this new life to be different from anything on Earth!"

"But I don't see why a mere difference—"

"Wait! Let us go a little more deeply into the idea that life is a disease. Not only is life as a whole a disease of matter, but each species of life is a disease to every other. The tubercular bacillus on the wall of your lung has no more personal animosity toward you than you had toward the duck you ate for dinner. It is merely living off its environment, as you are. Obviously mankind is as truly a disease of ducks as tuberculosis is of mankind."

"I see what you're driving at," said Dixon. "You mean that any new life I might discover would automatically be hostile to many or all terrestrial species. Well, I see nothing terrifying in that. Man has certainly dealt with any number of hostile species during his existence."

"Man has dealt with nothing!" Julius stated angrily. "Man has been dealt with. You talk as if he had arrived at his present form by sheer will and fierce determination. That's contrary to the first principles of evolutionary science. Man is a form of life that has been shaped by its enemies. Yet even after millions of years of adaptation, he is not immune to attack by species which are a part of the very environment in which he has developed. And you propose to introduce something new!"

WHEN angry, Julius Humboldt was somewhat overbearing. "Well, then, would you advise me to give up the idea?" Dixon had asked meekly.

"Am I your master? Do I do your thinking for you? Make up your own mind! I just want to be sure you know what you're doing."

There had never been any doubt in George Dixon's mind about what he was going to do. He made that clear.

"All right. Do you have your meteorite?"

"No," Dixon admitted. "It's astonishingly difficult to get hold of one. So far I have had no luck at all."

Julius drew a folded newspaper from his pocket and held it out, indicating a paragraph.

An unidentified visitor to the American Museum of Natural History late yesterday afternoon departed with a small meteorite, the property of the museum. He was seen by a guard, rapidly leaving the building, after having stood for some time over a case containing a number of similar exhibits. Dr. Hardman, Curator, when questioned, could suggest no motive for such a theft.

Dixon looked up curiously from the paper. Humboldt was leaning back, negligently tossing a small black stone from one hand to the other.

"Catch!" he said.

Clumsily George caught it.

"Why, you can't—I can't— It isn't right!" he stammered.

"That's my affair!" snapped Julius. "The

moral stigma attached to you by the transaction is very small and very theoretical."

"But—"

"But, nothing! That meteorite is going to be put to a real use, instead of being eternally gaped at by a succession of idiots who don't give a hang what it is or where it came from. I've done my part. I'm going."

"But wait a minute, Julius! What do you really think of this experiment?"

"I think it's a promising line of enquiry and a very laudable task. Praiseworthy, but uncertain. What is this life you hope to find? How will you detect it? Have you stopped to think that there may be life that we cannot observe through the senses developed on Earth, life that doesn't obey the rules we have set up? I suppose you will use assimilation as a yardstick.

"You will look for something that increases itself at the expense of other things. A ticklish job, at best, because that something may be intangible, immeasurable and altogether strange to you. In other words, you are looking for a new disease, one that you will not understand when you find it. What will it attack? What will it feed on?"

Humboldt had gone, then. An unsociable man, his visits were rare and short, yet George Dixon wished he were there now. Dixon badly needed someone else to think for him.

The little block—the food—was gone.

WAS there something there that increased itself at the expense of other things? Had he succeeded? Was there life? The food was gone, but where was the "something that increased itself"?

It must be under the glass. Everything had been sealed tight.

In the pot on the window-ledge was only a stalk. All the rest was black dust. He stared at it dully. Suddenly a glimpse of something on the arm of his chair made him start violently. It moved toward him, a gray thing, splotched with black. He started violently, stared at it without belief.

It was his hand!

Dixon struggled to his feet and stood trembling in a wild panic. What was happening?

He stared at his hands. Diseased! The word brought a new terror. Julius Humboldt's words rang in his brain:

"Life is a disease, something that increases itself at the expense of other things."

Dixon stared pleadingly at the glass jar. It must be under the glass! It couldn't get out!

"Life that we cannot observe through the senses developed on Earth, that does not obey the rules we have set up. . . ."

A horrible possibility flashed into his mind. With a sob, he blundered out of the room, blindly slamming the door. He needed help. He needed Julius. The telephone—

* * * * *

Julius Humboldt was cursing softly as he stumbled out of bed and snatched up the receiver, but when he hung up his expression was even more grave than usual. The

Why "Death From the Stars" Is My Favorite

By ROBERT W. LOWNDES

Robert W. Lowndes

"DEATH from the Stars" is a timeless story. It was written in 1931, but, if you didn't notice that it's a reprint, you could well consider it having been written yesterday. And, for many years to come, it will still be new.

Why? Because it deals with something one can almost consider eternal: the vast, impersonal forces and energies of the cosmos that lie outside the narrow sphere of what we know. Specifically, it deals with what may be a minor aspect of these forces—life. You will find no "epic" here; no super-humans, no beautiful heroines. It is grim, as indeed living itself must be grim once the gates of relative security which surround our present-day world-civilization are lifted.

All science-fiction stories, of course, cannot be realistic. Science-fiction would become a grim collection of tragedies if such were the case; danger, death, and decay flood the cosmos—even in our safe little present (safe compared to the deadly aspect of alien worlds) we find this the case. Thus science-fiction, as a whole, is optimistic, looking forward to bright tomorrows, filled with man's conquest of all dangers and his ultimate triumph in the cosmos. Which is as it should be.

But, in the long run, stories which we know are real will be remembered.

confused babble on the wire would have been meaningless to anyone else, but it galvanized him into action. Hurriedly he set about dressing, though it was the middle of the night.

Five minutes later, a shabby figure, he raced down on a creaking staircase and emerged on Tenth Avenue. Turning east, he half-walked, half-ran along Forty-ninth Street toward Broadway.

JULIUS HUMBOLDT was shabby because he was poor and because he did not care. He was taciturn, perhaps a misanthrope, although more inclined to disregard his fellow men—than to hate them. He had once been a professor of chemistry at Columbia University, but constant clashes with the authorities had necessitated his resignation. He now lived precariously on a small annuity, seldom doing any work of a type calculated to increase his meager resources. He had few acquaintances and only one friend, young George Dixon.

At Broadway he plunged down the steps into the subway and boarded a downtown train. Arriving at Pennsylvania Station, he learned that the next Port Washington train left at four. He muttered to himself as he studied a time-table. Great Neck, four-forty. He paced up and down the platform.

"The block is gone—gone! It's got me—" and then something about a geranium. George had certainly sounded wild. There must be something really wrong.

Humboldt knew what the block was. George had written him a letter, explaining how he had broken up the meteorite, pounded and pulverized it into a fine powder. This powder he had mixed with a combination of foodstuffs, animal and vegetable. The whole combination he had then compressed under great pressure into a small, square block, which he had then subjected to different temperatures and various frequencies of ultra-violet rays.

A simple, almost childlike performance, Julius Humboldt reflected, yet it was direct and reasonable, characteristic of George. If this gave no results, he would try some other way.

But, wait! George had said the block was gone. Julius stood still, biting his lips. Had it been stolen? That was ridiculous. It had no value.

The gates clattered open. Absent-mindedly he boarded the train. Expensive, these Long Island trains, he thought ruefully. For fellows like George, though, who didn't have to worry about money, it didn't matter.

"It's got me!" What could Dixon have meant by that? Hands thrust deep in his coat pockets, his chin on his chest, Humboldt attached the problem as the train rumbled under the East River and out into Long Island.

As the journey advanced, he began to feel more agitated. Several times he shook his head violently. Once he gave a startled exclamation, causing the few other passengers in the car to turn amused eyes in his direction. They did not remain amused for long. Gaunt and forbidding at his best, Humboldt had suddenly turned grim as death.

The Great Neck station was deserted and he set out at a quick pace to cover the half-mile to George Dixon's house. The sky was overcast and no signs of dawn were yet visible. The damp air enveloped him like a black mist, depressing his spirits and seeming to increase his sense of dread.

The large house, set back among trees, was an ominous jet shadow as he approached it by a winding path. Obsessed with a strange uneasiness, he walked on tiptoe, straining his eyes and ears. Abruptly he was frozen into immobility by a sudden high-pitched, gurgling laugh. It rose and fell and ended in a sob.

He gazed in horror at the house. That had not been George. Who—what was there? Slowly he advanced, mounted the steps, put his hand on the doorknob. From inside the house came a shrill cry, a crash, then silence.

For a long time Humboldt stood still, his head thrust forward. Then he opened the unlocked door and slipped quietly into the blackness. He remembered vaguely the plan of the house. To the left was the laboratory, to the right a sitting room. Straight ahead was the stairway, flanked by a narrow hall leading to the back of the house.

He moved to the left and felt along the wall to the laboratory door. A faint line of light showed beneath it. He knocked and waited, but there was no sound. Cautiously he pushed open the door.

THE room was empty. The light came from a large globe in the ceiling.

He advanced across the floor, his eyes darting in all directions. He paused at the table in the center, gazed thoughtfully at the small heap of metallic dust under the jar.

"Pretty well cleaned out," he muttered. "It's gone, all right."

Again he glanced around. This time his eye was caught by the strangeness of the flowerpot on the window-ledge. It appeared to be filled with something black. He walked over and warily dug into the surface with his finger. Underneath was dry earth. There was just a thin layer of powder on top. He pursed his lips.

A sound behind made him wheel around and stare into the hallway. It was a moment before he saw in the darkness there a crouching, mottled shape. It was a man, half-naked, his skin a dead gray splotched with black. He was staring at Humboldt with wide, fixed eyes and creeping forward with a convulsive motion.

"George!" Humboldt suddenly shouted in recognition. "In God's name, what's the matter?"

He had taken three alarmed steps forward when George Dixon leaped. Humboldt had a flashing glimpse of wide eyes, flaring nostrils, bared teeth. He ducked instinctively. The flying body struck him a glancing blow on the shoulder, then crashed full-length on the floor.

"George!" he cried.

The prostrate creature screamed and

beat the floor with its fists. Humboldt recoiled, horrified.

"Mad!" he breathed through white lips.

He advanced gingerly. Kneeling, he placed a hand gently on Dixon's shoulder. There was a quick, sharp snarl. He snatched his hand violently from between the closing teeth and again leaped back, stood rigidly still. Hurried thoughts raced through his brain. He would have to do something for George and do it quick! A doctor?

He frowned irritably. What could a doctor do? Humboldt didn't want some fool messing around and making things worse. What was wrong with George? That was the question.

He had to assume it was the experiment that was responsible. George had been sane and in good health before it, so his condition was probably a result of it. Obviously the experiment had been a success. George had found something that had consumed the food under that jar. He might as well call it life as anything else, although it must be totally different from terrestrial life. Apparently it was something in the form of a ray—light ray, gamma ray—for it could pass through glass. Humboldt was pretty sure of that, but then what would it do?

He stood rigidly still, gazing down with unseeing eyes at the now quiet figure on the floor. He must marshal all the facts, must understand this monstrosity in order to conquer it. . . .

GEORGE had babbled something about a geranium. Humboldt remembered the flowerpot and his eyes widened. He could visualize graphically what had happened—what was happening. Rays shooting out, radiating in all directions from the jar, passing through the plant on the window-ledge and consuming it, passing through George.

He shuddered. The brain, the nerves, the most delicate organs would go first, naturally. He must do something, get a doctor! A sedative might help.

He left the room and locked the door behind him. Heading for the telephone stand, he tripped over something. It was the telephone. The wires had been torn out of the box, but there was an extension in George's bedroom.

Humboldt took the stairs three at a time. There was a light in the room. He had just picked up the phone when the bed caught his eye. The sheet was a strange, dark gray in color. He bent closer, Something was wrong. He touched it and started violently. The sheet crumbled to powder under his hand.

He shook his head in bewilderment. The sheet was visibly affected in the same way as George and the geranium. But why not something nearer the laboratory?

He gasped as the full meaning of the phenomenon burst upon him. George had infected the sheet! George was a food supply for the strange disease. Therefore he was giving off the rays—and in enormously greater quantities than the little block had done!

Horror overcame Humboldt and he sat down heavily on the bed. George was broadcasting death!

Humboldt tried to look ahead, to understand the full significance of that fact. George was broadcasting death, contaminating anything and everything that came near him. In turn, the infected things were radiating death. Where would it stop? What could stop it?

He shrugged his shoulders helplessly. He couldn't fight a disease he knew nothing about. The horror would spread like wild-fire. George was a menace to mankind, to all life, to the world!

Humboldt snatched up the telephone, then slowly set it down. He couldn't call a doctor. He couldn't call anybody. Nobody would understand. They would take George to a hospital, where he would spread disaster at a terrific rate, or they would hang around and infect themselves, then go out and carry the disease wholesale. Warnings would be no use. People never paid any attention to warnings they could not understand. They would laugh at him. He could hear them:

"Life from the stars! Disease from space!"

They would call him mad—and then fall victims to the horror they derided. And the moment a few were infected, nothing could stop it. He himself knew more about it than anyone else, yet he had no idea how it could be checked. . . .

He wondered vaguely if he were infected. Perhaps not, after so short an exposure. Well, he would be, before he got through.

He would have to work alone. Work? He drew his hand across his eyes. Work on what? Grimly he considered. He couldn't leave George alone. He must try to save him, no matter how small the chances. He must study the rays, try to find a cure.

From below came a *thud* and pounding on the laboratory door. He shivered slightly. What was he to do with George? He would have to keep him quiet at least, even if he could do no more.

FROWNING heavily, he descended the stairs. The racket in the laboratory was steadily increasing in volume. To the pounding was now added shrill, angry cries.

A hypodermic of morphine would be necessary, for such noises would soon bring inquisitive people, and inquisitive people meant disaster. But how could he get morphine without a doctor? He knew one in the city who minded his own business, but deals like that required money and he had none. Nevertheless, he had to do something right away. That howling could be heard a block away.

He unlocked the door. It burst open, knocked him violently backward. Before he could regain his balance, the maniac was upon him. He fought vainly against the powerful, frenzied grip on his throat. Blood pounded in his ears. His temples throbbed.

With his one free hand he reached along the floor for the loose telephone that he

knew was there. He found it. Swinging it up, he relentlessly clubbed the head of his assailant. The grip on his throat relaxed and George Dixon rolled over limply on the floor.

Getting to his feet, Humboldt raised the limp form in his arms and slowly mounted the stairs. He laid it on the bed and bent over it. George would be out for three or four hours, he decided with relief, and he needed at least that.

He searched methodically through the clothes in the closet, found only a little over six dollars. Search of the bureau netted merely the checkbook of a local bank. He stared at the checkbook, finally shook his head. He would try searching the rest of the house first. An hour's search, however, brought no results.

At seven o'clock in the morning he was seated at a desk with the checkbook and one of George's letters before him. Promptly at nine he was at the local bank. The young teller looked worriedly at the check he presented.

"Are you staying with Mr. Dixon, Mr. Humboldt?" he asked.

"Yes, I am."

"Well, it's a rather large check."

"If it is identification you want, I have a letter from Mr. Dixon to myself," said Humboldt brusquely.

The young man studied the proffered letter gravely.

"All right, sir. You know we have to be careful. How will you have it?"

HUMBOLDT caught the nine-fifteen train to the city. He sat huddled in the corner of a car, exhausted and a little sick, positive that he was on a fool's errand. He knew George could not be saved. It was only a question of how long he would live, which probably was not long. A disease that could attack vital nerves would kill quickly. . . .

Humboldt stirred uneasily in his seat. George's death, he reflected grimly, would not end the matter. There was enough substance in his body to feed the disease for weeks, perhaps months. And throughout all that time the deadly radiations would continue, menacing all life, passing through all barriers.

All barriers? He remained deep in thought during the rest of the journey. By the time the Pennsylvania Station was reached, he had come to a decision.

An hour later he was richer by a few grams of morphine and a hypodermic, poorer by a considerable sum of money. He was studying a classified telephone directory. Finding what he wanted, he called a number and gave an order. There appeared to be some difficulty at the other end.

"Yes, lead," he stated irritably. "Don't you understand English? Do you have one, or not? Good! I want immediate delivery. What? I don't care what it costs. Yes, this afternoon. Get a truck. I will pay all delivery charges. . . ."

He gave the address and hung up. The journey back to Great Neck he spent in deep thought. How was he to study the rays? How could he make them tangible, measurable? An electroscope? Photographic plates?

He groaned in despair. Studying them would be so arduous, so complicated, and he had not a minute to waste. The rays were spreading rapidly, he was certain, eating into the timbers of the house, into the ground, perhaps—

TO his immense relief the house was quiet when he let himself in at the front door. He mounted the stairs on tiptoe and cautiously unlocked the bedroom door. Caution left him then. For a moment he was overcome by nausea.

Forcing himself, he approached the black lump on the bed. The head was bald. The one ear that he could see was no more than a stump. The nose was a black wound in the ghastly face. The eyes were gone.

Fighting his disgust, he reached out a hand. The body felt like warm mud. He shuddered and drew back. There was no need for the hypodermic now, but he was glad he had got the other thing.

His eye was caught by three ugly indentations in the skull. At sight of his own work, horror surged up within him. He dashed headlong from the room and down the stairs.

He sank weakly into a chair in the living room. He was trembling, tired, incapable of thought. He knew he should get out of the house, for it was foul with clinging death. He imagined the hideous rays in the air about him, felt that he could almost see them. They would be coming from many sources now, shooting in all directions. . . .

Julius Humboldt's head fell against the back of the chair. He knew he had to get up, but he needed a little rest. His strength was exhausted.

Suddenly his eyes became intent. He had been gazing at the ceiling, but until now he had not noticed the dark, irregular stain in its center.

It alarmed him, somehow. What would cause such a stain? What was above this room? Feebly he concentrated on the problem. The stairs—the hall to the right was—George's bedroom. The Thing was lying right above the stain!

He shivered. He would have to get out, but he needed a little rest. He relaxed. The stain had a peculiar shape. He decided that it had legs, a head and one arm. He watched it steadily. It seemed to move a little.

Yes, it was moving! In sudden alarm he struggled to rise, but could not. The one arm of the shape was stretching out toward him. He knew it would feel like warm mud. His terror was a physical pain, yet he could not move.

Instantly the warm mud was all around him. He was sinking in it and could not breathe. Death was near, but help was coming. He could hear it, a small bell, impossibly faint, then a booming sound. He doubled the fury of his struggles and suddenly was free.

Humboldt opened his eyes and leaped to his feet, angrily realized he had been

asleep. Somebody was at the front door, ringing and knocking. He would have to answer, but it was a nuisance. He stepped into the hall. He didn't want visitors, but maybe it was—

He started as he swung open the door and saw a policeman. He remained silent, collecting his wits.

"Mr. Dixon home?" rumbled the officer.

Julius Humboldt put out his hand and grasped the door. He stood perfectly still, frowning.

"No, he is not at home," he said.

"No?" The officer's tone was peculiar. "Well, maybe you know something about this. Is your name Humboldt?"

"Yes."

Humboldt stared fixedly at the slip of paper. The officer shook it impatiently.

"Where'd you get this check?" he demanded.

"From Mr. Dixon."

"Yeah? Well, I wanna hear Dixon say that."

HE took a step forward, but Humboldt stolidly blocked the way.

"Mr. Dixon is not a home," he repeated.

"Oh, so you're gonna get hard, huh?" the officer growled. "You better be nice, get me? This here check is a phony and I got a good mind to take you along to the station right now!"

He eyed Humboldt's shabby clothes with unconcealed contempt.

"You know you can't do anything of the sort," pointed out Humboldt calmly, "until you have found Mr. Dixon."

"Well, I'm gonna find him soon enough. All I have to do is search this house."

He made another attempt to enter, and still Humboldt did not move.

"You have a warrant?"

Again the policeman stopped and glowered.

"Hard guy, ain't yuh? Well—"

He was interrupted by the sound of a heavy truck rumbling up the drive. He turned.

"What do these guys want?" he demanded.

Humboldt's lips tightened.

"That is none of your affair."

"No? We'll see about that. Hey, what do you guys want?"

The driver climbed down from his seat. He looked alarmed, then indignant.

"Why, we got the coffin. We was to deliver it here, and let me tell you, lead coffins ain't—"

"Oh, a coffin?" the officer cut in. He swung around, looked up and down, apparently including the entire house in his broad sneer. "We got a lot of complaints about screaming and banging in this house last night. Now you're having a coffin delivered, eh? I think you're gonna have some explaining to do."

He whirled and bellowed at the gaping truck driver:

"Take that thing down to the station house and leave it there! We don't have no funerals around here without the undertaker! And as for you"—he turned to Humboldt—"I'm comin' back, get me? This time I'll have a warrant—" Suddenly he stopped and gaped. "What have you got on your face?"

A chill shot through Humboldt. He stiffened.

"That also is none of your affair," he said softly.

The officer gave him a look of concentrated venom.

"All right, wise guy, you wait!"

He stamped down the steps.

Humboldt closed the door. He walked slowly and with clenched fists to a mirror. One glance was enough to tell him what he wanted to know, but he stared in horrified fascination at his ghastly face. Then he turned and walked out of the house. He noticed without surprise, scarcely with interest, that the grass up against the front of the porch was black and burnt-looking. He looked up at the window of George Dixon's bedroom.

A maple tree grew near the house and a large branch forked toward that window. The leaves were not green. They, too, were black and burnt. Humboldt laughed harshly.

STUDY the rays? Much chance he would have! You couldn't study a thing that crumbled your body and stole your reason. Even his one little gesture had been thwarted, he thought bitterly. He had hoped to protect the world from George with a lead shield and they had taken even that protection from themselves.

He would be the second to go, but not the last. Perhaps the policeman would be the third. He would warn him. Again Humboldt laughed.

"Don't go into that house, warrant or no warrant," he would say. "In there is invisible death. I don't know what it is. It comes out of the skies."

"Gettin' funny, huh?" the policeman would snarl.

But even if he were convinced and didn't go in, the rays would spread through the grass, through the trees, through the ground. How much air could they traverse? What were they? Humboldt called them rays. He had formed a word picture of them, but it was just a picture, nothing more. He knew only that they were something that fed on Earthly substances, mainly living things, it seemed. How could anyone stop a disease like that?

He stiffened suddenly, his jaw set. He strode swiftly to the road and down the hill toward the town. Perhaps he could beat the policeman to it. He smiled grimly. Thief, forger, buyer of drugs, possibly a murderer—he would try to beat the law once again. He would commit one more crime—perhaps two. . . .

Ten minutes later he reached a filling station.

"Do you have any five-gallon tins?" he asked the attendant.

"Yes, sir."

"Well, my car is out of gas up in Mr. Dixon's garage. I want you to fill two tins and drive me up there."

"Well, I can give you a gallon. Then

you can stop by here and—"

"Do what I say," snapped Humboldt, "and don't stand too near me!"

The attendant merely gaped at him.

"Get it!"

Humboldt threw a roll of bills at him. The man succeeded in mastering his astonishment.

"Yes, sir!" he cried.

He filled the cans and placed them in a rickety car. Humboldt got into the back seat.

"Go up the driveway and set them down at the front," he directed.

The man drove with the speed of fright, stopped before the front steps.

"Don't you want them in the garage?" he objected.

"Do as I say!" snapped Humboldt again.

The attendant deposited the cans on the steps and prepared to go.

"Had a fire?" he inquired chattily, looking around at the grass.

Humboldt did not answer. He lifted one of the cans and lugged it into the house. He heard the car rattle away.

FROM the kitchen, at the back of the house, he secured a dipper. Methodically he began to scatter the gasoline in all the rooms, on the floors, walls, ceilings and furniture. He hurried from one room to another. His legs felt numb, he was a little dizzy, and then there was the policeman. . . .

He ran upstairs. In one of the rooms he found a closet, which had a tiny window looking out upon a grove of trees at the rear of the house.

"Private in back," he muttered with an approving smile.

He tried the key in the lock and turned it from the inside. He went on with his work. Over the monstrosity that had been George Dixon he poured a gallon of the fluid.

Then he went downstairs and out of the house.

There was no one in sight. The grounds were fairly spacious, the nearest house being over three hundred yards away. Quickly he walked around the house, emptying his second tin on the walls and porches and on the grass. Finally he laid a little train of it out across the backyard.

It was getting dark. He lighted a cigarette. Stooping, he dropped the match on the last little splotch of gasoline. A tiny flame shot up and ran toward the house.

He walked slowly around to the front and went in, locking the door behind him. He sat down on the staircase. Reaching into his pocket, he drew out the little bottle of morphine and the hypodermic. He might as well make use of it, after all, he thought with some satisfaction.

The sight of his own hands sickened him. Ugly and black, they looked as if they might fall apart.

He filled the hypodermic from the bottle. Perhaps he was saving other people from having hands like this. Deprived of food, this life or whatever it was from another star might die a natural death. It might not, of course, but the chances were that he was doing a lot of people a lot of good. . . .

He dug the needle into his leg, laughed wryly at the lack of sensation. With nothing to lose, he was making a fine hero!

He got to his feet and slowly climbed the stairs, finding it increasingly difficult to move. He went into the closet and lifted the tiny window. A roar and a wave of hot air greeted him. He drew back with a smile and locked the closet door.

A tongue of flame shot up past the window, licking at the sill. He gazed at it admiringly. Wonderful stuff, fire! Clean, pure and vital, it was the highest state of matter.

The heat was choking him now. The roaring and the heat were now tremendous, yet he laughed.

Robbery . . . forgery . . . murder . . . arson . . . and now suicide.

He tossed the key into the flame.

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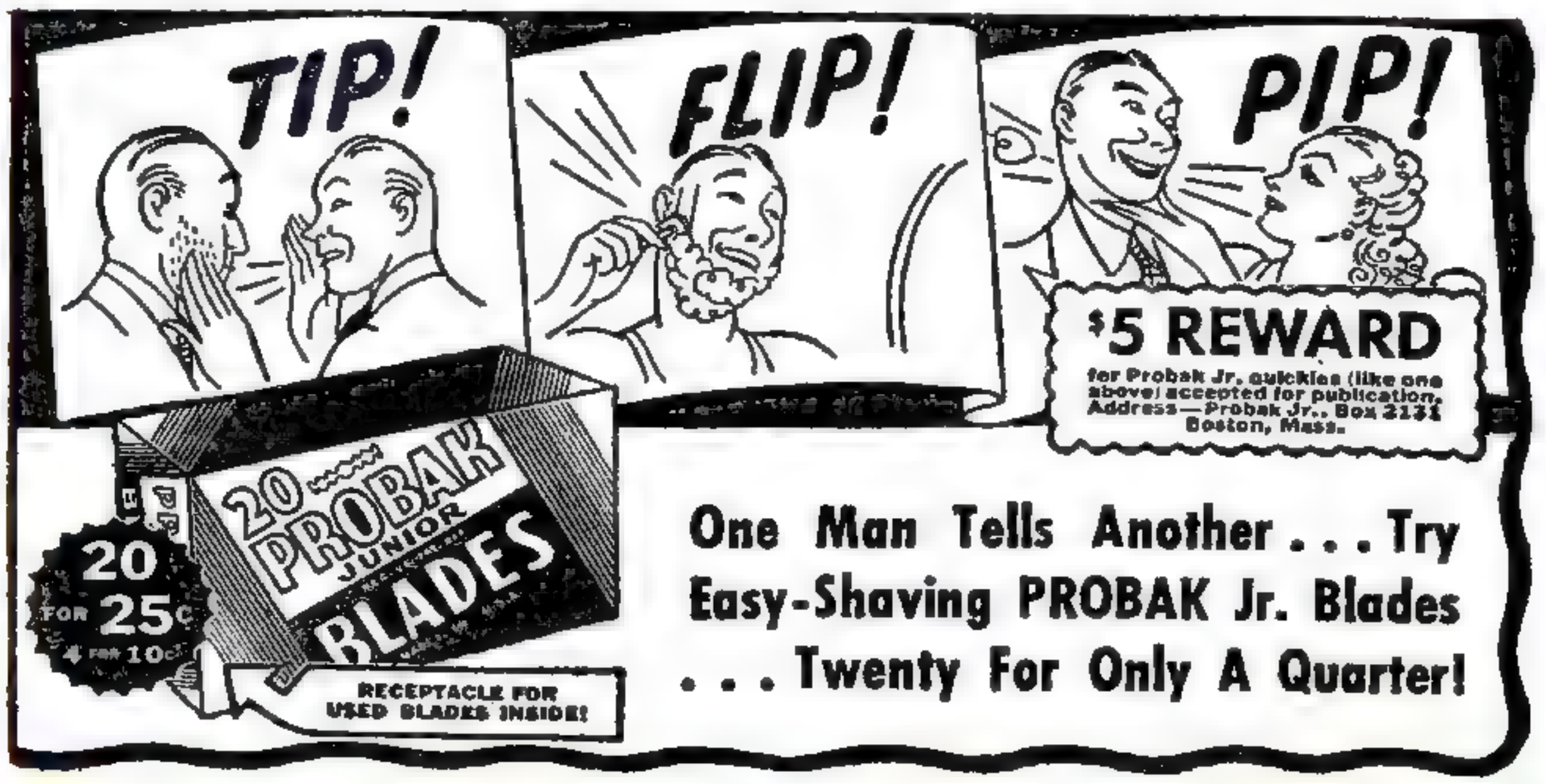
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No Heroes Wanted

By ROBERT MOORE WILLIAMS

Author of "One Way Star Ride," "The Tides of Time," etc.

Red Riley knocked the technician away from the controls

Test Pilots Make News When They Test the Ships of Space—But Red Riley Makes History When a Spaceship Tests Him!

THE Old Man's secretary took Red Riley around to meet the staff. They all said "Hello," and were mighty cool about it, the way they always are when a new test arrives at Lunar Experimental Station. They don't give you anything out there on the moon. Everything you get, you have to earn, including recognition.

Especially recognition. Why, if old Lucas Herkheimer himself, who made the first rocket flight to the moon back in the seventies of the last century, should turn up at the workshops under the dome—which he won't, being long dead—he'd have to earn the right to call himself a rocket man. They're that way out there. Once you've earned their respect, they'll die for you and ask no questions, but first you've got to prove

yourself. A rough, tough bunch of hombres.

That was what Red Riley thought, as he was shown around the Lunar Experimental Station. It was all right with him, though. He wasn't exactly soft himself.

He had been a commercial pilot, pushing liners on the Moon-Mars run. For a whole year he hadn't had a run-in with a meteor and he hadn't tangled with an ether warp. In general, so much of nothing had happened to him that he had grown bored.

That was why he had applied for a job as test pilot at Lunar Station, where something could be expected to happen to take a little of the monotony out of life. They needed another test pilot—they always needed another good test pilot—and because he had a good record, Red Riley had gotten the chance at this fine opening. At least he thought it was a fine opening. Older and wiser men thought it was a fine way to commit suicide.

THE last man he met on this first tour of the dome was Black Jim Hardigan.

"Mr. Hardigan, meet Mr. Riley," the old man's secretary said.

Hardigan was reading the latest edition of the Cosmic Globe, which is radioed all over space. He was sitting in a swivel chair in his office, his feet propped on his desk. He didn't look up.

The secretary cleared his throat apologetically, scraped his feet on the floor, and repeated that Mr. Riley was here and would like to meet Mr. Hardigan.

Hardigan went on reading, holding the paper about six inches from his nose. He had been a pilot once, and he would have been a pilot still if the doctors hadn't caught up with him and asked him to please read the letters on the bottom line. Nasty people, these doctors, but after all a pilot has to have good eyes, especially a test pilot.

They say the blow-up that came when the bad news was whispered to Hardigan was loud enough to be heard all over the solar system, air or no air to carry the sound. So Hardigan was now an inspector. *The* inspector, responsible for the final check-up on all experimental jobs that took off from the station. He might not be able to see well enough to pass the pilot's test, but it is not of record that he ever failed to see anything that was wrong with a space ship. The men who worked for him swore he could smell a bad casting, or a fuel pump that wasn't working right, or a blast tube that was defective.

They also say he could smell a new test pilot before the poor devil even landed on the moon.

He went on reading.

Red Riley was not a man ever to figure he owed anybody much of anything. He stood there, a stocky, youthful figure, sizing up the situation. At first he thought possibly Hardigan was deaf. Then he realized what was happening. His face didn't get red, the skin being too tanned for that, but little flecks of dancing flame began to come and go in his eyes.

"So it is trouble you are looking for, Hardigan?"

Hardigan continued reading.

Riley stuck out a toe. Very neatly he kicked Hardigan's swivel chair out from under him.

Hardigan hit the floor with a bump that rattled the furniture. He wasn't hurt, but to put it mildly, he was surprised. After all, he was Black Jim Hardigan, and people just didn't treat him that way. Especially not fledgling test pilots.

"Get up," said Red Riley. "And say hello to the man."

Hardigan blinked at him. He had seen many a brash recruit in his day but he had never experienced anything which might compare with this. He got up.

The secretary was bubbling words. "Please, Mr. Hardigan—now, now, Mr. Hardigan—it's all a mistake, sir—we will take it up with the proper authorities, sir — please, Mr. Hardigan."

Hardigan brushed the secretary off his sleeve.

"There, there, Richard," he said

soothingly. "Remain calm. Whatever happens, just remain calm." Black Jim was beginning to grin, and the secretary, seeing that grin, grew even more alarmed. Hardigan looked Riley up and down, not missing a thing.

"New here, aren't you?"

Riley nodded.

"Going to be a test pilot, maybe?"

"If it's anything to you—yes."

Hardigan didn't seem to hear the answer. "Probably came here to show us how to fly ships," he said.

Red Riley was a fair man. He gave this matter some serious thought, taking his time before answering.

"Yes," he said.

After that answer, Hardigan had to brush the secretary off his sleeve again. Black Jim remained calm. He was a fair man, too.

"I can't say we don't need somebody to teach us a few things now and then," he said. "How long you been in space?"

"Five years."

Hardigan had spent twenty-two years in space, having stowed away at the age of sixteen, but he seemed to think that five years of training was enough to teach a man almost everything a pilot needed to know. At least his attitude indicated he thought that. He was very polite and respectful.

Red Riley couldn't understand this politeness. He was, first and foremost, a direct actionist, and all his instincts taught him to suspect that behind such politeness lay treachery. Also, in some uncomfortable way, he had the feeling that Hardigan was making a fool of him. If Hardigan had got up from the floor and started swinging both fists, Riley would have known how to meet him. But Black Jim seemed to have forgotten that the chair had been kicked out from under him. He showed a polite interest in Riley's background and training.

"Glad to have you as a valuable addition to our staff," he said finally.

With that he picked up his overturned chair, sat down in it, drifted his feet on the desk, and turned his attention again to the Cosmic Globe.

Riley felt like a fool. Worse, he felt like a helpless fool. There was pride in Red Riley, plenty of it. He was proud of himself and proud of his record. He was proud he was alive and proud he was a man. A smack in the jaw he would have taken and come up asking for more, but a kick in the pride left him gasping on the ropes.

IN the days that followed, his pride was to take a terrible beating. He was treated with a casual coolness that sent his hot blood up to the boiling point. No matter what he did, nobody seemed to pay any attention to it. Assigned to test out a new ship to see if there were any hidden flaws in the design, he put the flier through a series of maneuvers that would have curled the hair of any pilot in space, and came dropping into the dome expecting somebody to tell him what a good job he had done and what a hotshot pilot he was. Recognition was what he wanted.

He got yawns.

He wanted this hard-boiled outfit to call him by his first name and get drunk with him over in Lunar Port and play practical jokes on him. He got politeness and nobody seemed ever to know that he had a name.

Nobody seemed to remember that he was Red Riley, with a record for coolness and daring as long as your arm. Nobody seemed to know that he was the pilot who had brought the *Space Queen* into port after her stern tubes had blown out, setting her down without the loss of a life. He had done that job in his first year as a pilot and the newspapers had made a hero out of him. In the Lunar Experimental Station nobody seemed to have heard of the *Space Queen.*

Nor had they ever heard of the *Maid of Mars.* A fuel injector had failed just as the *Maid of Mars* was nosing in for a landing on Venus. With the injector out, the braking rockets wouldn't work. The pilot, by quick thinking, had managed to set her down in a swamp. Two men had been killed, but if the pilot hadn't been lightning fast, all aboard would have died. A Red Riley piloting job. Nobody had heard of it here.

"Well," said Red Riley to himself. "Well."

Inside he was burning. But he wasn't the kind of a space-dog to tuck his tail between his legs when he didn't get what he wanted. He put a chip on his shoulder, and chose a technician named Jones, who weighed two hundred and twenty-five pounds, to knock it off.

A casting didn't fit exactly right, Riley said. Technically, Riley didn't have any business sticking his nose into such matters, but because test pilots risked their lives on the strength of such things as castings, they were allowed more than a little leeway. Jones removed the offending part. An hour later he brought it back.

"It's still not right," Riley said.

"The micros say it's right," Jones said mildly. "It fits the specifications."

"Then your gauges are off."

"I had the inspector gauge it with me," Jones said. "He said it was right."

The inspector was Black Jim Hardigan.

Riley knocked Jones a good twenty feet. He expected the technician to get up and come back swinging. Jones got up. He brushed the dust off his clothes, felt of his jaw, looked Riley up and down—and walked away.

RILEY was too dumfounded to move. He looked himself over to see if he had leprosy. No leprosy. Yet Jones, who looked as if he had spent half his life in one fight or another, had taken a knockdown without a murmur.

The Old Man came by a little later. He drew Riley off to one side.

"The boys here," he said, "have strange ideas."

"Yeah?"

"Yes. You can't fight your way into their respect."

"So Jones ran to you for help."

"Jones ran to me for nothing," the Old Man said. "But if Jones told me a casting met specifications, I would be inclined to believe him. If Jones and Hardigan both told me a casting was right, I'd not take the word of the archangel Gabriel against them. You want to be a test pilot, don't you?"

"Yes," Riley said.

"All right," the Old Man answered. He walked away, leaving Riley glaring after him. Jones and Hardigan turned up with the casting and fitted it into place. Riley watched them as long as he could, not saying a word. Then he stalked out of the dome and went over to Lunar Port.

Quite a place, Lunar Port. Because the moon is a handy halfway station to space, all traffic to and from earth transships on the moon. A ship carrying enough fuel to fly from the earth to Mars would not have much room left for pay load. So they use ships of one design to transfer traffic from the earth to the moon and ships of a different design to make the long hop to the other planets. Due to the lighter gravity, freighters can lift a load from the moon that they couldn't budge on earth, and since they synthesize fuel on the moon, the result is a real gain in pay load.

Red Riley took on quite a pay load in Lunar Port. Then he went down to the section that in cities on earth would be over behind the gas works and said he supposed he was about the best man who had ever set foot on the moon.

The Old Man bailed him out, paid his fine, and took him to the hospital.

The next day he reported back for duty, and Black Jim Hardigan, after looking over the cuts and bruises on his face, assigned him to test a new experimental job that had just been finished. He took the ship out of the hangar with a roar that rattled Hardigan's teeth.

She was a new job, this ship, designed for the space patrol, a sort of mosquito boat built to go places in a big hurry.

Red Riley lifted her up above the moon, set her on a line, and looked over his crew of four. Before they had blasted off, the crew had been laughing and joking with each other. They didn't laugh and joke with Red Riley. They treated him with exaggerated politeness. Obedient to his slightest wish—after all, he was boss

out here in space—they carried out his commands with a frigidity that made him burn inside. He looked at their wooden expressionless faces, and grinned widely.

"Okay, boys," he said. "We'll put this baby through her paces."

He shoved her nose down, pushed juice into the stern tubes, straightened her with a couple of bursts from the steering jets, and headed the ship straight toward the surface of the moon in a power dive with the rockets wide open.

Back in the days when men flew with wings, a power dive was dangerous business, even at the relatively slow speeds attained by planes. Many an air pioneer had failed to pull out in time and had dug a hole to bury himself in.

The only difference between a rocket ship and a plane was that the rocket boat could dig a deeper hole.

Red Riley pointed the nose of the ship toward the moon. He put her down, down, down, keeping an eye on his crew to see how they were taking the dive. If he could make one of these blank-faced zombies show fear, it would be a minor victory.

He set the ship screaming down until the rocky, pitted surface of the moon was rushing upward at a stupendous rate.

"How am I doing, boys?" he asked.

"Very good, sir," one of the men answered.

Very good, sir! The ship was practically breaking her neck boring a hole in the ether.

"We ought to get more speed, it seems to me," another of the crew said. "With the new mixture we're using on the fuel, it seems she ought to do a little better than this."

Red Riley almost fell out of his seat. They were riding him! Him! A bunch of mechanics were riding Red Riley! It was about the most impossible thing that had ever happened to him.

He lifted the nose of the ship. Rivets creaked in every bone of her as she came out of the dive.

So it's speed they want, he thought.

"You know, I believe you're right," he said musingly. "She ought to do better than that. We'll take her up and try her again."

This riding was a game that two could play.

He pointed the nose of the ship at the far reaches of space and blasted up. Covertly, he watched the crew, but they knew he was watching them. They kept themselves busy at the gauges that recorded the operation of the ship.

The moon was a pitted, leprous orange when he turned the little flier and kicked the blasts wide open. The ship was a howling ether vortex racing at blinding speed toward the moon when he turned to ask the crew how he was doing.

His heart jumped when he saw his crew. They were showing fear! He had made these wooden-faced monkeys show fear at last! They had pretended to shrug off the other dive but this one had got them. They stood like frozen statues staring at the instrument panel.

For the first time since he had arrived at Lunar Station, Red Riley felt good.

One of the crew whirled toward him.

"Stop the blasts!" the man shouted.

Riley grinned. "She's not really warmed up yet," he answered.

THIS was fun. He could see Black Jim Hardigan's face when he asked for another crew—"Give me some boys with a few guts this time. That last bunch almost shook themselves out of their skins."

Black Jim wouldn't like that. The Old Man wouldn't like it. The whole damned staff of the Lunar Experimental Station wouldn't like it. They were finally shown up for what they were, a bunch of lily-edged cowards masquerading under the disguise of politeness. Red Riley laughed.

The man who had shouted at him to stop the blasts lost his head. He made a dive for the controls.

Nothing suited Red Riley better. He was absolute master of this ship and his orders were just a little more sacred than any law ever written.

"Get away from those controls."

How he would love telling this to

Black Jim Hardigan! "One of the boys kind of lost his head, Hardigan, and tried to take the controls away from me. You maybe better speak to him about such things."

Hardigan wouldn't be polite when he heard that.

The man didn't obey. He turned a white face toward Riley and stammered something, meanwhile jerking at the power bar.

Riley knocked him clear across the cabin.

"Any of you other lads want some of the same medicine, I'll be glad to oblige," he said.

The crew didn't seem to want any of it. Riley saw they weren't even looking at him. They were staring at a meter on the instrument panel. Not the speed indicator. The fuel gauge.

Red Riley saw the fuel gauge. The needle was playing tag with the empty mark. The tank should have been almost full. But it wasn't. It was almost empty.

Somebody, somewhere, had made a mistake. Who it was probably didn't matter. Black Jim Hardigan was the inspector. It was his duty to see that the tank was full.

The little ship was screaming through space, straight toward the enlarging moon below. *And there wasn't enough fuel in the tank to slow that mad dive toward destruction.* There wasn't enough fuel left to work the braking rockets. There was maybe enough juice to swerve her in her course, but no more.

Riley's hands dived lightning fast toward the controls.

"My God! Why didn't somebody tell me?"

There was no answer. One man had tried to tell him and had gotten knocked across the room for his pains. They stared at him.

"Check the fuel tank. Maybe the gauge is lying."

They checked the tank. "The gauge is right, sir."

"But the tank was full when we blasted off."

"Perhaps the gauge was stuck, sir."

That could have happened. To make certain that things like this did not happen was one reason why the station employed an inspector. There was a special cap in the fuel tank. The inspector was supposed to take a metal rod and by thrusting it into the tank, determine how much fuel was in the container.

THE technician whom Riley had knocked down got up off the floor. He looked through the port at the moon rocketing upward to them, glanced at the gauges, and then looked at Riley.

"What are your orders, sir?"

This man was going to die. They were all going to die. Yet this technician stood there and asked for orders. He had lost his head for a moment and tried to take over the ship but now he had regained control of himself. He stood there asking for orders.

Red Riley didn't say anything. His tongue was caught in the back of his throat and was about to choke him. He knew now that these men were just as tough as they looked, and that, in trying to scare them in a power dive, he had merely been making an ass of himself.

"I'm sorry." Riley's voice was choked. "If I hadn't tried to make this dive, and burned up a lot of fuel getting as high as I wanted, we might have discovered the gauge was stuck and had a chance to save our necks. It was my fault, and I'm sorry."

It was the first time Riley had ever said he was sorry for anything.

The technician looked at him and through him. "Very good, sir," the man said.

Riley's tongue stuck to the top of his mouth. "My God," he whispered, "I've said it was my fault and that I'm sorry. Don't you buzzards ever give a man a break, even with death looking you in the face?"

There was no answer. Riley looked at them. They looked back at him, without seeing him. With every tick of the clock, the ship roared closer and closer to the moon.

"You're the pilot, sir," one of the men said.

"By God, I'm the pilot, am I?" Red Riley said from between clenched

teeth. "All right then, I'm the pilot. I'm going to show you buzzards a piloting job that will make your hair stand on end. But before I start, I'm going to take ten seconds to tell you what I think of you."

He told them what he thought. None of it was printable. Then he told them what he was going to do with the ship.

"You think we don't have a chance," he sneered. "Just watch a real pilot handle a space ship."

Of course, he did have a chance. There was a little fuel left in the tank, enough to swerve the ship. He could have used that fuel to turn the nose away from the moon, pointing the ship out toward space. That way they wouldn't crash into the moon. But—the ship would become a free body in open space. It would keep on going, maybe forever. Without fuel to check and direct its flight, it would keep on going.

Maybe it would be caught by the sun, maybe it would crash into an asteroid, maybe it would swing into the gravity field of a major planet and be drawn to its doom. But more than likely it would keep on going forever, winging its way out across space, marching out toward the stars.

That way, it wouldn't crash. They could radio a patrol ship to come and rescue them. But out in space, a rescue ship wouldn't have a chance in a million of finding them. There was no food aboard, and oxygen only for twenty-four hours. No rescue ship could find them in space within twenty-four hours.

RED RILEY did not point the nose of the ship toward space.

"We'll either die in a hurry or we'll live to walk out of this buggy," he said.

The crew knew what he was attempting. Their faces showed it.

Red Riley jammed himself into the control chair. His fingers played over the bank of buttons in front of him like a musician fingering the keys of a piano. That was what he was, a master musician fingering the keys of a known, beloved instrument. In his way, Red Riley was a genius.

The crew watched him. They knew ships and they knew the men who flew them. They watched Red Riley. The fear on their white faces was mingled with awe.

He had just so much fuel. When that was gone he had to be in a certain place traveling in a definite direction at a certain speed. There were three factors in this equation. Speed, position, and course. All three had to be right. Riley had only enough time to make the necessary computations in his head. He couldn't stop to figure it out on paper. He had to solve his equation mentally, with the aid of that strange ability that great pilots have, the ability to fly by the seat of their pants.

The others watched him, with respect but without faith. The audacity of his purpose stunned them. Speed—position—course! Upon the exact calculation of these three factors he was basing his hopes of saving the ship from plunging into the moon. If humanly possible, he was going to set the ship in an orbit circling Luna, just as the moon was on an orbit circling the earth!

It had never been done before. With a ship out of fuel, there could be no second chance if it failed.

Red Riley fingered the controls. Gently he pressed the buttons. The steering rockets throbbed. He fed juice into the stern tubes, precious juice. He fed a little more into the steering rockets, jockeying for position. He seemed to forget the crew, to forget the moon below them, to forget everything. He seemed to feel the motion of the ship through the seat of his pants. He seemed to feel the gravity of the moon, pulling at the ship with the strength of uncounted thousands of horses. Sweat dripped down over his face, dripped unnoticed.

The rockets shuddered into silence as the fuel tank went dry. The ship was out of control. Only inertia was keeping her moving.

TWELVE hours later, the little flier, held in two monstrous magnetic grapples dangling on long chains from a repair barge that had

answered the hurried radio call for help, came into Lunar Experimental Station. The whole staff was on hand to meet it. Black Jim Hardigan was there, his face a mask of worry. The Old Man was there, but all his gruff dignity had been left in the front office.

The ship slid to the floor of the dome. The door opened. Red Riley stepped out. His jaunty air was gone. There were lines on his cheeks, lines cut there during the last twelve hours. There was bitterness in his eyes. He walked up to the Old Man.

"There she is," he said, waving his hand at the flier. "A good little ship."

"My God, Riley," the Old Man gasped. "What happened?"

"Not much," said Riley. "We ran out of fuel." He looked at the Old Man but he spoke to Black Jim Hardigan. "I thought we had an inspector around here who was supposed to make certain that all the little things, like testing the fuel tank to make certain the gauges aren't lying, were taken care of. That's what I thought."

It got awfully quiet in the dome then.

The Old Man looked at Hardigan.

"I stuck the tank," Hardigan said. "I pulled the measuring rod and it was wet all the way down, when you blasted off. The tank was full."

"I doubt that," said Riley. "You were probably so busy reading the Cosmic Globe that you didn't have time to stick the tank."

"You're a liar," said Black Jim Hardigan.

"I'm a liar, am I?" said Red Riley. His eyes went up and down Hardigan. "There she is. The tank is dry. If it was full when we blasted off, how come it went dry so quickly?"

"That's what I want to know," said Hardigan.

"Well, I know," said Riley. "You've hated my guts ever since I turned up here. Why? Because I'm what you're not—a pilot. I fly ships. You can't fly ships any more. You've eaten your heart out because of that. You know what I think, Hardigan? I think that tank was almost empty when we took off. I think you knew it. I think you tampered with the gauge so it would read full. Why? Because you wanted me to go out of here and kill myself. I think you're insane, Hardigan. I think you've gone black crazy—because you can't fly a ship any more."

Such things had happened. Mental hospitals were full of cases like that. Hardigan's eyes had failed. Had he brooded over that until he blew his top? A bunch of mechanics digging into the little flier made the only noise in that huge room.

Black Jim Hardigan stood like a chunk of rock. All emotion had drained out of his face. The Old Man didn't say a word. One of the mechanics came hurrying over from the flier but when he saw the silent group he stopped.

HARDIGAN'S fist, cracking against Riley's jaw, was a harsh thump of sound. Riley going backward, opened a path in the crowd. He sat down heavily, a little stunned. He sat there, shaking his head to clear away the effects of the blow.

The mechanic shoved himself through to the Old Man. He whispered something. The Old Man's sigh of relief was almost comic. He looked at Riley.

"I've just had a report on what really happened," he said. "A pea size meteor struck the ship a glancing blow. It gauged a groove in the skin of the ship and just scraped the edge of the fuel tank. Probably it happened too quickly for the fuel to explode. Anyhow, Red, that's where your fuel went. Out into space. The gauge wasn't lying, Riley. Your fuel leaked out."

Black Jim Hardigan looked like a man who had just received a reprieve from hanging. Riley sat on the floor, feeling of his jaw and thinking about what he had just been told.

"I can still lick you," he said to Hardigan. "Even if the tank was full, and even if you're not nuts, I can still lick you. You're too damned polite to suit me."

Black Jim beamed at him. "Red," he said, "after that piloting job you just done, you can have a chance to

(Concluded on page 129)

SCIENCE Question BOX

ELECTRICITY FROM HEART

Editor, SCIENCE QUESTION BOX:
Is it true that the heart of a human being generates electricity?—O. L., Hillsdale, Michigan.

Yes. As a matter of fact, the modern flight surgeon uses a record of the electric charges produced by the heart muscle to test the physical condition of potential pilots.

In one of the latest tests, electrodes are put on the embryo flier's chest, one leg and wrists. His heart generates a current which travels through the heart muscle and is recorded on a movie film. The medical examiner knows what the normal picture should be and he can immediately note and identify any changes from the normal. He can always double-check by using a new kind of stethoscope, electrically controlled.

In all known cases of this type the results have concurred.—Ed.

PRECIOUS GEMS

Editor, SCIENCE QUESTION BOX:
What are the most precious gems known to mineralogists, and why are they precious? —C. V., Norfolk, Virginia.

Of the more than fifteen hundred minerals which are known to mineralogical science, approximately fifty are used as gems. While this number seems small, it should be explained that some of these fifty species have many varieties. For example, there are about twenty gem varieties of quartz, among them being rock crystal, amethyst, rose quartz and carnelian.

Only three of the fifteen hundred minerals possess the qualities which make them precious, namely, diamond, corundum and beryl. Few persons are familiar with the last two mineral names but would recognize ruby and sapphire, which are gem varieties of corundum, and emeralds which is the precious gem variety of beryl.

To be considered precious, the gem must possess at least three important properties, beauty, durability, and rarity. A fourth property, ease of portability, is sometimes included in the requirements, but this is important only in times of stress, such as during periods of war and revolution.—Ed.

SUPER GRAVITY

Editor, SCIENCE QUESTION BOX:
Is there any force known to science that is more effective than gravity?—L. L. S., New York, N. Y.

Yes. A newly discovered force, 200 times as effective as gravity, was announced to members of the American Astronomical Society at a recent meeting.

Dr. Lyman Spitzer, Jr., of Harvard College Observatory, told of this attraction, which acts on minute particles of dust between the stars.

It is really a consequence of a well-known effect—the same pressure of light that makes a comet tail point away from the sun.

Such radiation pressure pushes on the dust particles in space. When two different pieces are in line with the body from which light is coming, the first one absorbs the light that would go to the other, and hence tends to approach the second. The force of this attraction is 200 times as great as their gravitational pull on each other, he stated.

With only two particles, this force would not be appreciable, but there is a great deal of material between the stars, and the attraction has to be considered in studying the behavior and distribution of interstellar matter, it was declared.

Each particle, he said, has a negative electrical charge of about two volts potential. Since they are charged the same way, there is a repulsion between them and thus they will never come together. Their average speed, he explained, is about two or three miles per hour.—Ed.

CHLOROPHYLL

Editor, SCIENCE QUESTION BOX:
Is it possible for plants to exist without chlorophyll?—T. M., Pittsburgh, Pa.

Occasionally nature produces an albino plant that is devoid of chlorophyll. Lacking the apparatus for photosynthesis, such a plant grows until it exhausts the nutriment stored in its seed and then dies because it has no way of manufacturing food for itself.

Mushrooms and other members of the vegetable kingdom that exist in the dark require no chlorophyll for existence. This is because such plants are parasites and feed on foods stored in the soil instead of creating their own foods.—Ed.

In this department the editors of STARTLING STORIES will endeavor to answer your questions on modern scientific facts. Please do not submit more than three questions in your letter. As many questions as possible will be answered here, but the editors cannot undertake any personal correspondence. Naturally, questions of general interest will be given the preference. Address your questions to SCIENCE QUESTION BOX, STARTLING STORIES, 10 East 40th Street, New York City.

LET'S start off with a brief recapitulation before we read some of the letters you space-birds hurl at the old sarge's head. In "The Water World" we gave you Earth in solution. In "Gateway to Paradise" we gave you Earth as an arid desert. In "The Bottom of the World" we gave you a mixture of both. And what happens? No, don't answer. Let me tell you.

You guys and gals would kick if you were playing soccer! Ray guns and disintegrator gadgets—humph! Old Sergeant Saturn has seen and tried them all. None of them compare to the vitriolic pens of you bedeveling spaceteers. A skinful of Xeno bug juice and a pen dipped in the distillate of wild skunk cabbage from Ceres, and you birds go to town. Can't we ever please two-thirds of you at one time?

But who cares? If we didn't give you something to beef about there wouldn't be anything to this department. And speaking of deviling the old sarge, we're going to pour the fire to you next issue. Better get out the asbestos suits, dust 'em off, and vulcanize the rock ant holes.

For here comes *The Gods Hate Kansas*, by Joseph J. Millard. And are you going to get your eyebrows singed and the skin scorched on your—neck napes!

Naw, I'm not going to tell you all about this latest yarn by Millard. But I will tell you that Joseph Millard brought it in with his briefcase smoldering, dropping glowing embers along the corridor, and belching great clouds of smoke and flame. We thought at first we were receiving a visit from one of the Mercurian Fire-eaters of the hot side.

Daniel Defoe, better known for his production of "Robinson Crusoe," wrote a literary classic entitled "A Journal of the Plague Year" which was a novel dealing with the Great Bubonic Plague that decimated Europe in the Middle Ages. Boccaccio used that same terrible scourge as the background against which he highlighted his immortal "Decameron."

Today, in the new light of medical knowledge, safe and secure in the midst of our serums and antitoxins, we don't even comprehend the actual living and breathing terror that lay in the fear of plagues in the dark ages. We don't even appreciate the comparatively recent conquest of small pox and grumble because our children have to be vaccinated. One glimpse of the terror and horror and suffering and helplessness of a small pox plague of just fifty years ago—and we would all run screaming to the surgeons with the vaccinating needles.

Comes now Joe Millard with the story of even a more terrible plague of the near future—practically tomorrow—when helpless and terrified humanity run crazy and wild. Of course, there is plenty of action, science, fantasy and love and humor in this yarn, and the old sarge is not going to spoil it for you by giving away any details, but when you read with incredibility about the unreal, unreasoning scenes in "The Gods Hate Kansas"—*remember* that your own ancestors scurried in greater ignorance and fear and panic before a lesser plague catastrophe.

We had to call out a couple of fire trucks and one harbor tug to cool the manuscript down sufficiently to handle. You guys are lucky it's coming to you in cool weather. But it will still be sizzling enough to warm you up, and I'll be looking for some hot comments from you infra-red sharp-shooters.

THE ETHER VIBRATES—with the letters sent in by loyal followers of science fiction. Add your voice! This department is a public forum devoted to your opinions, suggestions and comments—and we're anxious to hear from you. Remember, this is YOUR magazine and is planned to fulfill all your requirements. Let us know which stories and departments you like—and which fail to click with you. A knock's as welcome as a boost—speak right up and we'll print as many of your letters as possible. We cannot undertake to enter into private correspondence. Address THE ETHER VIBRATES, STARTLING STORIES, 10 East 40th St., New York, N. Y.

HALL OF FAME CLASSIC

The selection for our next story in this series is a happy one, a veritable gem of a story which is presented in the best fable and parable style. You are going to enjoy the very dignity and simple nobility of the manner of the telling of this yarn. "The Boneless Horror," by David H. Keller, is truly a classic for the Hall of Fame.

Special Note

We haven't had a report, at this writing, on the Denver convention of science fans and writers, of course, but here's an interesting item and a mark to shoot at. On Easter Sunday, April 13, 1941, the first science fiction convention was held at Sydney, Australia—and they had a registration of sixty-seven fans present. Next year they expect a larger attendance at Melbourne. All right, you American space rascals, are you going to let our Australian cousins show us up? Attend your local meetings and all the yearly conventions you possibly can. And if there is so much blasting of atomic theories going on that you can't get a chance to express yourself, you can always take it out on yours truly. The old sarge's head is bloody but unbowed.

So let's see who's sniping at him in this issue.

LETTERS FROM READERS

You know, without going into an academic discussion on time, the calendar and kindred themes, I would like to point out in passing that even the incredibly ancient Mayan civilization had an excellent method and system of indicating dates. Your old space dog could go on with a lot of tail-spin and rocket blasts about the several existing calendars in use on Earth today, not to mention the Martian Time Scroll or the Menusian date calculator, etc., but I'll content myself with the simple suggestion that, as we are using a pretty good system of our own, including the Scandinavian—why the dickens don't you space bugs all date your letters?

Half of them open with the abruptness of a panhandler asking for a dime for a cup of coffee—no address, no date, no salutation, and sometimes no signature. I don't know whether I'm reading a letter today, tomorrow, or last month.

No, I can't look at the postmark, you smart guy from the provinces of Pluto. We have a gum-chewing office gal who cranks them through a gadget called a letter opener which slits the envelope like a Saturnian ice-bear decapitates a ring-tailed irruk. When I get 'em, all I have is the missive itself which opens up like a clap of thunder and shuts off like a fused rocket tube. And some of the handwritten ones read like a country doctor's prescriptions. What's the matter with you birds? D'you think the old sarge has nothing else to do besides work out cryptograms?

Here's one of the better samples—like a flash of lightning, or a stiletto in the gizzard.

PET PEEVES

By Knarf Nosredna

One of my pet hates is the manner in which illustrators dress the future men and women. Why are the "she-males" all attired in exotic gauze costumes so strangely suggestive of the mysterious East of today?

I like Friend's novels very much and would like to see much more of his work in the future issues of STARTLING. Fearn's "Superman" was disappointing. If the giants' weights were equalled in proportion to their strength, why were they compelled to wear bracing suits of armor? If Teddy's brain was so superior, why did he go about changing people in such a savage manner, and what was his plan? Leigh Brackett has too much moral and not enough progressive action.

I like your thumbnail sketches. They are practically as good as many regular featured shorts I have read. In haste—6909 Ellis Ave., Seattle, Wash.

Well, sink your Neptunian saber teeth in that one. Pilot Nosredna is short and to the point. Like a haircut in a Jovian barber shop for pitmen. I don't know whether everybody will agree with you or not, Knarf, but you let down your hair in charming brevity. Next time do a real job and tell us more. Maybe we can work up a real argument and a good sweat. And don't you like good looking dames in gossamer habiliments? The old sarge does. I recall the time I was between ships at the first outpost on Ganymede and—er—but to get on with the mail.

THE EYES HAVE IT

By Flora Belle Mitchell

I have been reading STARTLING STORIES for some time, and I think they're superfine! You always have my favorite authors and swell stories. The first story I read was "The Kid From Mars," and they have all been as good as that. I have one fault to find. Odin, in "A Yank at Valhalla," had two eyes in the picture. Odin always had one eye—even in the story it mentioned that he only had one eye. Correction, please!

I'm glad to see the gals reading something a bit different than the usual thing. Keep up the good work, the rest of you. I know I will.—River Falls, Wis.

Thank you, Flora Belle, for the flowers. I can see with half an eye that you read your science stories with both of your eyes wide open. There being nobody within ray-gun distance but the office cat, I guess Sergeant Saturn will have to take the blame for that artistic slip you mention. How about writing again, and in more detail?

What have we coming up now? Ah! I thought that Friend guy was getting too many compliments. Here's something to slap his ears down.

LIQUIDATING FRIEND

By Walter Cadmus

Deah Sargy-wargy: So now we have a watery world! It's too, too touching. Oscar J. ought to be put in lace panties. "Our little hero" is dumped into the future and finds the whole earth all wet. But that didn't daunt our slap-happy hero (he had an extra pair of socks) so he just went breezing along in a sub—at one hundred miles per hour!

Why does Oscar pick on such an old theme? I've read stories in which the good old globe freezes, roasts, takes a bath, and explodes—and Jefferson Reade has the nerve to peek on our earth taking a bath. Ain't it got no privacy?

"Super Human" is also a miserable conception of an old theme. In fact, if I must put it bluntly, "Interplanetary Reporter" is the only good story in the issue. The cover and interior illustrations are okay, but why no Bok?

Another thing, Sarge, if you had to make a

forced landing on S. S., why didn't you wire me for a few thousand credits. I make such good ones that they fool everybody but the World Government. Well, I'll be blasting off now; and if this scandal sheet makes you feel bad, just take a whiff of nitrous oxide and laugh it off. May your rocket jets never be cold.—613 McClain St., Pittsburgh, Pa.

Never you mind my rocket jets, you—you counterfeiter! Why, blast your overfueled rockets, the idea of turning up your nose on an entire issue save for one little yarn. It must have been the morning after you were all hopped up with Xeno snake bite when you read your copy of STARTLING STORIES. I'll have the Interplanetary Reporter out running down *your* story. Sargy-wargy, indeed!

And you're completely off your triangulation if you think Friend ought to be in lace panties. He doesn't wear any at all. Out in the Martian red hills he comes from they had to run him down when he was twenty-one in order to put his first pair of jeans on him.

PASS THE ALPHABET, PLEASE

By David G. Miller

Dear Sarge: First, congratulations for the grand story in the latest issue of STARTLING STORIES! It was certainly swell. Of course I could have expected that improvements would follow just as soon as you got to work. Wow! I was certainly glad to see you with a job. Why, I never expected to see you again. Maybe you can't remember me, but I remember you all right. Stop and think and see if you can't remember:

Way back there during the second Earth war with Venus, don't you remember the time that you were asked to speak at the Yorkopolis School of Engineering? (I always did suspect that the only reason you were asked to speak was because all the other engineers had gone to the war, but that's neither here nor there.) None of the other boys seemed to like you for some reason or other. Anyway, I am glad that you have taken over the department.

This letter is also to announce the organization of a new society. The Society for the Use of Virgil Finlay on Both Inside and Outside Illustrations. Whew! Didja get that Sarge? In other words the SFTUOVFOBIAOI.

This particular fan is practically a neutral in the continual feud between fan and editor, but I do have a few opinions that I want to air. First, I think you mag is a good one except that the covers have too much of an inclination to giants and, to use the words of another bug-eyed monsters. I suppose this month's cover should have satisfied me, but it was still not quite what I wanted. How about a nice scene in space or a comet or so? This would certainly be a sight for sore eyes.

I would like to join the league, but I can not bear having to tear up one of my beloved TWS mags to get the certificate. Can't some thing be done about this law? Yours till the fuel runs out, (which it seems to have done) —909 West Duval St., Lake City, Fla.

Pilot Miller has been eating alphabet soup again. I tell you these Lunar hashhouses ought to be boycotted by all the space freighters until they start putting up good coffee in vacuum bottles—with a dash of Xeno on the side. And say, kiwi, you can stop digging up my personal history to smear all over this department. You might unearth—or un-Jupiter—some stuff that's better left buried. Sure, I remember you. You were the red-headed kid in the third row of seats just behind the Martian lad with the artificial larynx whose tuition was being paid by Manly Wellman. You always had a snappy answer. Especially that time you swiped the Martian kid's voice box and gave me some real double talk.

JUST A TRIBUTE

By Kay Duval

Dear Sarge: This is my first letter to your magazine. Being of the so-called weaker sex, I hesitated in writing, as I didn't see many girl fans in your column. Fact is, I don't remember seeing any at all.

But I couldn't stand it any longer, and just simply had to write. To begin with, your magazine is one of the best—and believe me there aren't many on that list.

Your stories, which I have been reading for a long time, always "hit the spot." "Sojarr of Titan" was a great novel, and the way Mr. Wellman treated the Atlantis theory was pretty good. Your short stories were all well done. Your Special Features always receive my greatest attention, for I think that good features make a good magazine (besides the stories).

Congratulate Mr. Bergey for that grand cover. He's certainly tops.

All that is left to be said is—thanks for a swell magazine.—Wellsboro, Penna.

Bless your heart, honey, the old sarge always welcomes messages from the gal readers. There's nothing weak about your sex save that you have tenderer hearts and more understanding than a lot of space-dizzy dead-heads who stow away for each voyage. You write every time you feel like it, and let down your back hair and complain at anything or anybody.

The old sarge may think a lot of things about all you pilots scattered out there in the spaceways, but democracy is certainly one thing that operates in this department, and every voice that we can possibly find room for gets heard. Here's a call for aid from almost "Down Under."

S.O.S. FROM AUSTRALIA

By R. D. Statham

Dear Sarge: This letter is more in the nature of an S.O.S. than anything else. All Australia's dollar exchange has to be used to purchase war materials and there are no dollars to buy magazines with, so we Australians have to go without. I would like you to print this letter in one of your S.F. magazines in the hope that some American S.F. fan will take pity on an Australian ditto and exchange science fiction mags with him for Australian non science fiction mags. We have one monthly, well worth reading.

I have read twelve STARTLINGS. I missed "The Black Flame" and "Five Steps to Tomorrow," two stories which rate high with your readers.

I liked ten out of the twelve, I tried to line them up, but had to give it up, they all seemed good. The two I did not like were "A Yank at Valhalla," and "Sojarr of Titan." Looks as if you are on the down grade, but I expect you to pick up again. We all have our ups and downs. Trusting you will be able to print the first part of this letter.—Taylor's Plains, Mongallala, Queensland, Australia.

All right, some of you space bugs drop this brother a line. And let us blast along, for there's lots of mail and darned little space to crowd it in.

MORE REPRINTS?

By Theodore Lutz

Dear Sergeant Saturn: Having read your magazine, STARTLING STORIES, for the first time (May, 1941) and considering the countless numbers of other magazines I have read, I was surprised at the genius of Oscar J. Friend in his "The Water World," and would like to see a sequel to it published.

Speaking of the other stories and departments, I liked "The Literary Corkscrew," "Interplanetary Reporter," and The Ether Vibrates. Speaking of all those stories the readers are talking about in their letters, why don't you reprint the best three or five stories at the end of each year. I am sure that those who have read them will want to read them again, and those who haven't will be able to read them. Yours till the human race becomes extinct. (No address given.)

Theodore, let me speak to you like a papa. If you could read some of my blistering hot mail, you would wonder how we had the nerve to print a lot of these stories the first time. But thanks for the suggestion. Who knows, maybe we'll be reprinting an occasional current yarn in our Hall of Fame Classics—after they age a little.

SAY IT WITH TITLES

By Martin Alger

Dear Sarge: Three cheers for the SFTPO-BEMOTCOSFP, it's our **Old Faithful.** Down with this aftpacobemocsfp (no capitals!) it's lower than a "Dweller in Martian Depths." It is a nothing. "The Circle of Zero" as it were. Let's toss in into "The Black Vortex," drown it in "Water for Mars!"

I snatched up the latest issues of SS and dashed into my "Den of a Stf-nut;" "The Alien Room" some call it. With the first issue STARTLING STORIES hit a high "Beyond Which Limits" no mag can go; then for a few months it went down like "The Fall of the Eiffel Tower." Now it seems to have leveled off and started to develop "Positive Inertia."

Bergey must have dipped his brush in "The Colour Out of Space" when he painted the cover for "Sojarr of Titan;" it draws attention like "The Mind Magnet." But how come a leopard skin on Titan? Was it "A Beast of the Void" that flew up there?

The cover for "The Water World" is almost "The Slithering Horror!" An **It** like that undermines a mag like "The Burrower from Beneath." Oscar J. Friend effects me much like "Macklin's Little Friend." He looks like he might be "King of the Monkey Men!" I hear "The Voice from Atlantis" so I'll close with "The Final Struggle."

Let's see what some of you other **Spacehounds of IPC** can do with this idea of saying it with titles.

P.S. Again, down with this sftpacobemocsfp; it's subversive. In it I see more underground activity than in **Tumithak of the Corridors!**—Box 520, Mackinaw City, Mich.

Pee-lot, you sound like a space-line writer on a yellow journal. If you had taken all three of our science magazines you could have written a "Journal of the Plague Year," couldn't you? I don't know how much of this I can stand, but go ahead and see what you can turn out. BUT don't start sending in any of those double-feature boneheads you read sometimes on the cinema marquees.

TAKING THE ART WORK APART

By Clifford Coleman

Dear Sergeant: As yet, I am unable to decide which of your three SF mags pleases me most. I am definitely against the changes made in THRILLING WONDER STORIES for the simple reason that you already have two mags with book-length novels.

Mr. Friend's "The Water World" is definitely a hit and can be chalked up with your recent successes, namely: "A Yank at Valhalla" (Hamilton hasn't failed me yet), "Sojarr of Titan" (plenty of action), and "Kid from Mars" (not so recent but plenty good). Would the old space dog mind informing me of the artist who illustrated for "The Water World"? I saw a vague scribble but couldn't make it out. It was fairly good art, but I've seen better.

On the subject of illustrators, here are a

[Turn page]

To People who want to write *but can't get started*

Do you have that constant urge to write but the fear that a beginner hasn't a chance? Then listen to what Fulton Oursler, editor of Liberty, has to say on the subject:

"There is more room for newcomers in the writing field today—and especially in Liberty Magazine—than ever before. Some of the greatest of writing men and women have passed from the scene in recent years. Who will take their places? Who will be the new Robert W. Chambers, Edgar Wallace, Rudyard Kipling, and many others whose work we have published? It is also true that more people are trying to write than ever before, but talent is still rare and the writer still must learn his craft, as few of the newcomers nowadays seem willing to do. Fame, riches and the happiness of achievement await the new men and women of power."

"I had no job, no chance of getting one. I have always had the desire to write. I saw your ad, borrowed the money to pay for the course. Before finishing your course I had become self-supporting as a correspondent for the state papers. I believe that if anyone wants to be a writer and will apply himself to your course, he will soon know whether his living is coming out of the writing market."
—Edward Foster, Talihina, Okla.

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few comments; Finlay and Bok are good artists, yes, but they don't belong in SCIENCE fiction, they are FANTASY illustrators. I don't know why, but Finlay ruined Kuttner's "Land of Time to Come" in your companion mag. Schomburg, Wesso, Paul, Marchioni (the off and on type), and Morey in that order are my favorites, and I don't see how anyone can dislike Wesso (Miss Baum)! Messrs. Sawyer and Young might be interested to know that I am heartily in agreement with them concerning BEM'S and would like to be considered a member of the SFTPACOBEMO-CSFP. Mr. H. V. Brown has taken an awful lot of abuse at the hands of such heartless, word-slinging anti-bug-eyed-monsterites as Carl Anderson and Bill Brudy. (Curse their critical souls).

Bergey is good, I'll grant that, but don't you think Bergey and Brown could alternate? This Belarski is only fair, try him inside the mag. Mayorga is worse. (Nothing personal by all means).

Ratings for May STARTLING STORIES: "The Water World," "The Literary Corkscrew," "Interplanetary Reporter," Thrills in Science, "Superhuman." Need I say more?

I guess that's about all, Sergeant. More power to you and more stories like "A Yank at Valhalla."—359 Center St., West Haven, Conn.

Paul Orban illustrated "The Water World." Hope you liked his drawings. No, I'm not running out of fuel; I'm simply running out of space. Sure, that sounds crazy, but we haven't got the whole of our light universe yet between the pages of this issue. No comment. Blast on.

ORDER OF FAVORITES

By Milton Lesser

Here's hoping that this shout doesn't disturb the orbits of too many heavenly bodies. Yippplieeee! Yes sir! A mighty big voice of approval. That's all for Wellman's quite comprehensible masterpiece in STARTLING STORIES. It was great, and how!

Below will be found all the novels in S. S. up to date, in order of preference.

1. "Five Steps To Tomorrow"—Eando Binder was, is, and always will be my favorite author.
2. "The Three Planeteers"—A darn near perfect adventure yarn is always welcome.
3. "Sojarr Of Titan"—Ditto!
4. "The Black Flame"—Typical of Weinbaum's unexcelled work.
5. "Fortress Of Utopia"—Williamson is the guy to get more from.
6. "The Prisoner Of Mars"—Good old Hamilton hit another bell-ringer.
7. "Twice In Time"—Wellman's fair stories are plenty good.
8. "A Million Years To Conquer"—In reference to Mr. O'Neil's question on the Earth-shield situation. I think that if such a situation ever rises, scientific minds will all agree "To heck with Space Travel!" That is, unless some way can be found to neutralize the plagues effect.
9. "The Impossible World"—It is almost impossible for Binder's yarns, any of 'em—not to rank quite highly with me. More from this master!
10. "A Yank At Valhalla"—Stories concerning Mythology are always good.
11. "Giants From Eternity"—Another Wellman. Swell!
12. "The Bridge To Earth"—Like Williams, just okay.
13. "When New York Vanished"—Another fair Kuttner, but not so hot.
14. "The Kid From Mars"—Ooff! Friend sure got himself in hot water with that hunk of junk.

Sorry to be discouraging, but for all I care, you can boot stories like "The Worlds Of If" to "The Screeching Snakes of Saturn's" second "Silvery Satellite," an' I mean that. I would much rather see stories like "The Eternal Moment" or "Over The Space-Waves." Arthur's short was slightly better than Coblentz and his Jovian Armada—both were very good. The departments are better than ever, except, the Ether Vibrates could be longer.

Would like to see a Wesso Cover—Bergey is getting to bore me. And how! In closing, I am saying that I hope to see Binder, Williamson and Hamilton in the near future. Incidentally, Hamilton's Yank was swell. Well, here is hoping to see this letter in print.—2302 Avenue O, B'klyn, New York.

So that's what Pilot Lesser thinks of the line-up. Well, son, you'll get agreeals—and vehement disagreeals. Don't ask me; I only work here and ride a space jallopy for excitement. Blast on.

TAKE THAT, MISS BAUM!

By Byron Kelham

Dear Sergeant, Sir: I am writing this in violent protest to Katherine Baum's letter. The kids have a right to have their letters printed as well as everyone else.

Is the SFTPOBEMOTCOSFP a real club? If so, I would like info on joining. I am boosting the Anti-BEM Society. Not only do we want BEM's off the covers, but out of the inside illustrations. Oh, yes, we have declared war on the SFPACOBEMOCSFP.—3725 SE Clinton, Portland, Ore.

And you should see Byron's postal card, Miss Baum. He printed every letter as neatly as our pet printer. No, Byron, the alphabet war over BEMs is not an exclusive or private battle. Anybody can get in if they have half a brick—commonly known as Irish confetti. Your stated opinion now makes you a member of your chosen army in good standing.

HOLES FOR "WATER WORLD"

By Eugene L. Calewaert

I have just finished reading "Water World" and I must say that it is the best stf novel I have ever read in a long time, in my opinion, at least. But, like all fans, I must put in my two zipperdos (Martain coins, or don't you get around?), and therefore, and so, here I go.

Now, for one thing, why couldn't those machines, the names escape me at the moment, but I mean the ones that converted water into oxygen and hydrogen gases, be used to rid earth of the water? Of course, the machines would have to have been enlarged, and it would take a little time, but sooner or later the Earth could be back the way it had always been, or am I wrong?

I didn't like Mr. Friend's novel "The Kid From Mars" so much, but "Water World" was really swell.

Someone, in one of your magazines said something about Sergeant Saturn being childlike, or something to that effect. This letter is addressed to that gentleman, so you can see that I don't agree. After all, Sergeant Saturn is a fictitious character, and when you say he is childlike you are also saying that the characters in the novels are just as childlike.

I like all the departments in STARTLING STORIES. So far I have the latest four issues of the mag. I failed to mention in my letters to CAPTAIN FUTURE that I also read this mag, but now I do. I believe, and I'm sure that many others do, too, that THRILLING WONDER STORIES, CAPTAIN FUTURE, and STARTLING STORIES are the best in stf, in regards to what they contain in reading.

As yet I haven't read "The Literary Corkscrew," but I'm sure it will turn out to be, since this is the first time I will have read this Hall of Fame short, a really excellent piece of work. I don't like the looks of "Interplanetary Reporter," though. Maybe I'm wrong.

I might as well insert here, just in case this letter gets put into print, that I'm thinking of starting my own fan publication, but I need material, so anyone can, if they want to, send in a story, article, poem, or drawing concerning stf.

That's all for now, but I'll be writing again.
—3117 E. Larned, Detroit, Michigan.

Go quench yourself, you liquidating lug. Not only does an author have to write an airtight story these days, but he has to make them waterproof. Sure, they could have disposed of Earth's excess H_2O in the manner you suggest. But then we would have been forced to have printed the last part of Friend's novel without ink and given you blank pages.

Friend will probably be back soon with a sequel to "Water World." In the meanwhile, why don't you freeze the water and skate around a bit?

A PLUG FOR THE ARTISTS

By C. Hidley

Dear Sarge: That magnificent yarn, "A Yank at Valhalla," may be marked down for the three-issue pause in the stream of "letters" from this reader. I'm just now getting back my breath. For an author who has been proclaimed a hack by the prominent members of our so-called fandom, Hamilton has certainly proved—at least to me—that he can still write superior stf. I personally believe that his hack days were over when he stopped writing fantastic "save the universe" yarns 'way back in the early thirties. It seems that all his recent work is beginning to get the apparently disinterested approval of his former severest critics. What better sign is needed to prove that a "comeback" is assured?

I was also surprised and delighted to note —that time six long months ago— that Wesso had made still another step in his climb to rejuvenated works of art. It was with an ecstatic joy that I prepared to praise his pix for Hamilton's novel; now that is passe. His unbelievably, magnificently superb illustrations for the finest of the Future novels, "Star Trail to Glory," is exactly the kind of work we have hoped for these many years. That is the type of stuff I have been harping for these many, many months.

I'm sure, though, that majority of the readers will agree that my words were not in vain; the newcomers who have been fed only the poorer Wesso have now seen the really artistic work he can do, and the older readers whose memories of the glorious early days have been dulled with so much "mass production" in this field of literature may have been awakened from their lethargic stupor for the briefest moment and might have received the faintest of refreshing breezes from the past. Let's hope so.

It isn't easy to "pan" an artist or author who contributes to the mags. Most of the fans feel this way, and that is why so many poor illustrators have invaded the field. We realize it is their source of income, and it sickens to think you might have had a hand in hurting someone's career—not to mention livelihood. But when a master has proven his worth, it only goads the fan into greater frenzy and action and vitriolic words when he begins to falter. I have attempted such a "crusade" against Mr. Wesso, and although I don't admit that my words had any effect upon his improvement, I'm happy to see that there has been one. I've already said too much on this subject, I guess.

Smith's "The City of Singing Flame" was the best of the reprints in the last three issues, as was it's companion Valhalla novel the best of its group, thereby making the first issue of the third year the finest to date. Paul's pic for the rep. was super, and I only wonder why he doesn't illustrate the novel. Despite my recently concluded laudations for Wesso, I agree with the very kind Miss Baum in her May letter in that the artist's monopoly is unfair to the myriad of other fine men. Brown, Murphy, Paul, Marchioni, Saaty and others equally efficient have never had a chance at the novels, and Finley, Schomburg, and Binder provided themselves most adequately with return tickets for the fine work they did.

(Continued on page 124)

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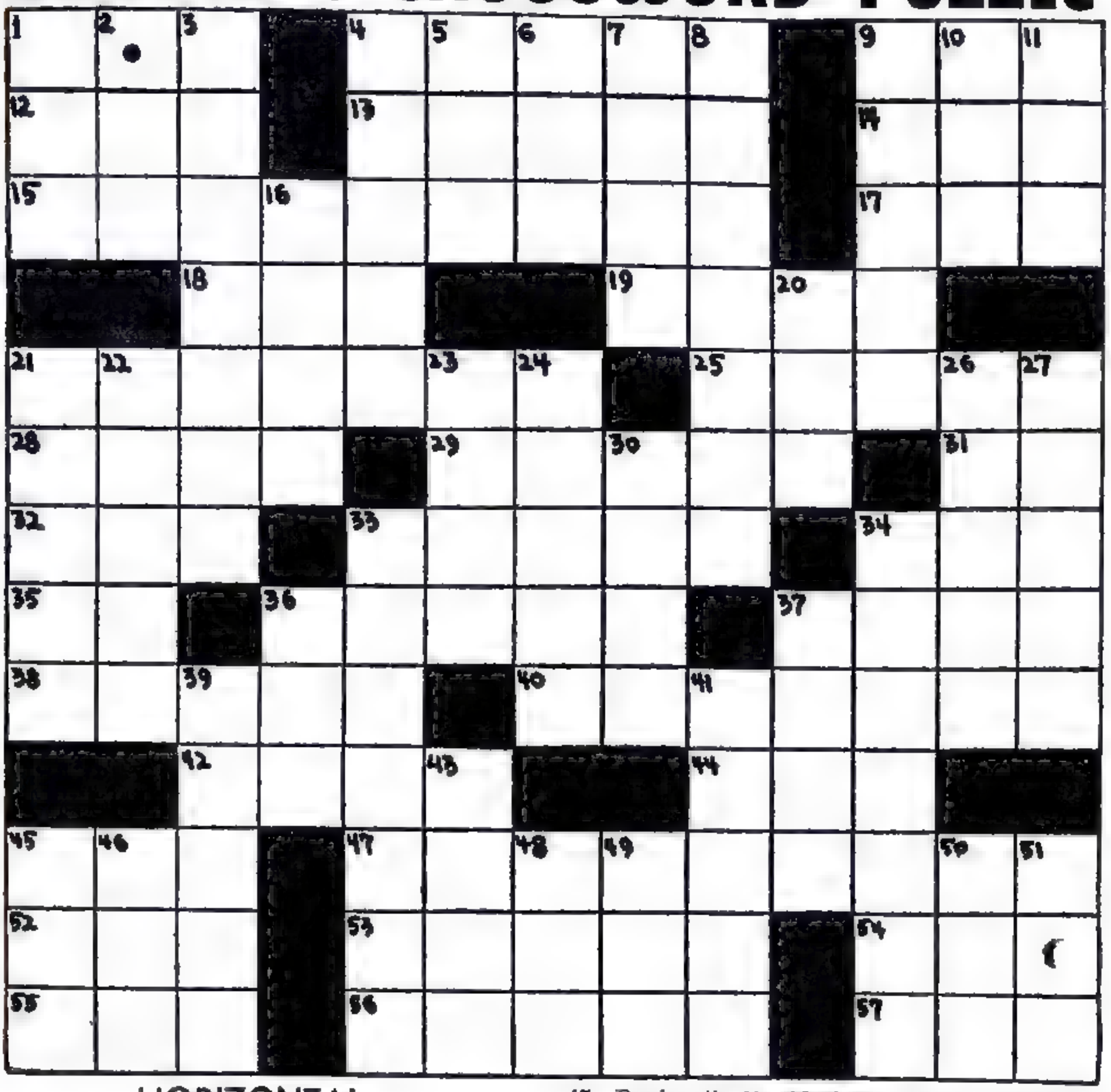

HORIZONTAL

1. Two thousand pounds.
4. Chambered spore-bearing tissue within the closed sac of a gasteromycetous fungus.
9. Limb of an animal.
12. Period of time.
13. Branch of a nerve.
14. Male name.
15. Passage in a bone or nerve.
17. Vessel or duct.
18. Vessel for holding liquids.
19. Variety of headless cabbage.
21. Day of the week named after the Norse god of war.
25. The Earth.
28. One of the Great Lakes.
29. Wireless transmission.
31. Hour (abbr.).
32. Short stiff piece of wire, with a sharp point and a round, usually flattened head.
33. Pertaining to weight, especially of air.
34. Chemical Engineering Organization (abbr.).
35. Third person pronoun.
36. Forms or matrices for shaping anything in a fluid or plastic condition.
37. Astringent mineral salt.
38. Type of star Algol is referred as.
40. Defect in the field of vision.
42. Oil, combining form.
44. Back.
45. Dark, oily liquid obtained by dry distillation from resinous wood, coal, etc.
47. Northern constellation.
52. Self, considered the seat of consciousness.
53. Clean the surface of, especially with an abrasive substance.
54. White malleable metallic element.
55. Cavern occupied by animals.
56. Plants that die completely, or down to the ground, after flowering.
57. Sinking of a heavenly body, below the horizon.

VERTICAL

1. Number of grams in a dekagram.
2. Natural substance containing metal.
3. Silky bitter crystalline alkaloid contained in the aqueous extract of opium from which the morphin has been separated.
4. Reduce to fine particles, as by crushing and friction.
5. Youth.
6. Large ostrich-like Australian bird.
7. Male of various animals.
8. Being in neutral equilibrium.
9. Largest glandular organ of vertebrates.
10. Chronological division of geological history of highest rank.
11. Matter in the aeriform state.
16. Urn-like vessel.
20. Constellation.
21. Lukewarm liquid.

22. One of the segments of the abdomen.
23. Salt inland sea in Russian Turkestan.
24. English measures of length.
26. Catarrhal discharge from the nose and eyes.
27. Plant fragrance.
30. Figure of a heavenly body, irrespective of its actual form.
33. White, friable substance composed mainly of calcium phosphate.
34. Small chambers, for storage or privacy.
35. Pronoun.
36. Gram-molecule.
37. Smallest particle of an element capable of existing alone.
39. Person whose mental capacity has been arrested during development and who represents mentally, the condition of a child of 12 years of age.
41. Volatile emanations, as from animals or plants, that affect the organs of smell.
43. One time, without repetition.
45. Spread loosely for drying, as newly mown grass.
46. Entire period of life or existence of a thing.
48. June-bug.
49. Remove or erase by friction.
50. Hard metal device for stamping or cutting out some object.
51. Small social hymenopterous insect.

The Solution Is on Page 129—
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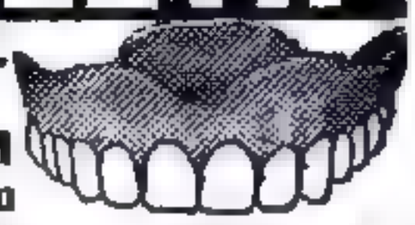

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THE ETHER VIBRATES

(Continued from page 121)

Why doesn't Clark Ashton Smith write stf anymore? And Miles Breuer, E. E. Smith, Dr. Keller, Miss Stone, S. P. Meek, Flagg, Hansen, Katley, Zagat, Starzl, Manning—especially Williamson and Vaughan. Oh! and on and on and on. These great classic writers did pages of superior work month after month for years when there were only three mags being published. Now there are an infinite number and these masters are not in evidence. Why?

We have lost many of the great ones with Weimbaum and Skidmore heading the sad list of the departed, and Campbell, Palmer and others editing their own mags. Can't you possibly obtain the work of the above?

To finish up January—at last—we find Miss Brackett's "Demons of Darkside" third and "The Hyper Sense" last.

I was extremely disappointed because Kuttner's "A Million Years to Conquer" had such a cool reception; I thought it especially good. I also complimented its Bergey cover. It foretold and has since proven that Br. B is a superb artist—but not for stf.

His one great cover—and one of the best TWS has had since Paul was dropped—was for Friend's "Blind Victory;" I doubt if he'll ever excel—much less repeat—such a work of beauty and design. His Valhalla cover was number ten out of eleven. The Sojarr "dream" was number eight out of twelve. With all the excellent scenes he has to be creative. Swell drawing though. Belarski was accurate—of all things—and good with "The Water World." The hero was dressed very silly, but that machine was a dilly. Wheee, poetry!!! Another request you've granted has been that one of giving the cover to the novel exclusively.

For some vague reason I dislike the formula plots that are given a stf suit of clothes. Oddly enough, I found the stories treated in this manner most entertaining—Monte Cristo, Zenda and even the modern court-room farces. But Tarzen on Titan was too much. I didn't care very much for Wellman's Sojarr—it certainly can't compare with this author's "Giants from Eternity" and "Twice in Time." Wesso's pix were a let-down from Valhalla, but a few were of the finer quality. I reread "The Worlds of If" from my old files a year or two ago, so did not get around to it yet. It was first, though, and much better than the above novel. I thought Paul's original pic was swell, so why did you substitute Orban, as good as he is? Arthur is popping up all over the place, much to my extreme pleasure. "The Eternal Moment" was grand, despite the pre-dawn plot. That Coblents short was awful; he only knows how to write novels. How about featuring one by him in the near future?

Lee O'Connell in the March letters, and all his ilk, shames me just a little bit. When I was eight, the farthest thing from my mind was stf and Paul covers. I'm sorry to admit that the stuff didn't infect me till I was twelve—dotage in the eyes of the new crop of fans. I prefer the letter dep't to start in the back of the book, where all dept's should be, a la March issue.

"The Water World" is so superior to Friend's "Kid from Mars" it rates second so far in the third year. The cover was seventh out of nine covers printed, and the Orban pix were breath-taking in their execution and vividness. The artist did some good stuff recently in another mag, but outside of that I had forgotten him. I'm profoundly glad you didn't. Bok and Marchioni were good this issue. How ever did you refrain from puttting the Fearn giants on the cover? I call that a step in the right direction. "Superhuman" was third and shared that spot with "Interplanetary Reporter." Of course, Keller's grand short was second and I sighed with satisfaction upon reading it once more.

I am only sorry that I'm not in the standing of the other fans you've nominated to choose stories because there is one that I thrilled

[Turn to page 126]

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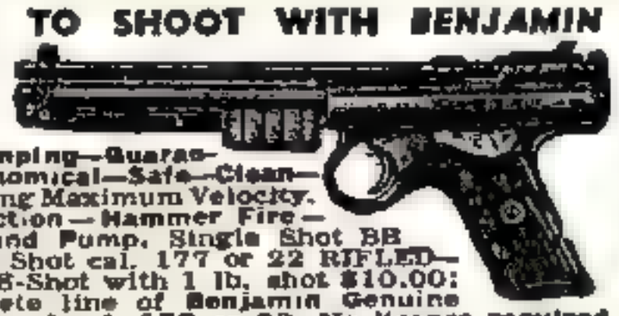

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to and I'm sure others would. It was another of Dr. Keller's and entitled "The Doorbell." I have a disgusting faculty of solving "surprise endings" in stf, but this one hit with such a bang that I've remembered it to this day.

Miller's editorial was swell as was his foto; he can't really be that young.—N. Y. C.

Well! At least, you got a wad of stuff off your chest, pal. I thought you were never coming up for air. Anyway, you said enough for both of us this eclipse. Blast on.

AN UN-COVERED ERROR?

By Paul Carter

Dear Sarge: I picked up STARTLING STORIES from the racks at our local space-station, and glanced at the oven—I mean the cover. Well, well, well; this Belarski is doing myself right proud, I sez. Though I still prefer Bergey, he **can** do a B.E.M.—less cover, you know. Well, anyway, I opened up and read "Gateway to Paradise". That's when the shock hit me!

Sarge, I ask you—what on Earth, including the six adjacent dimensions, does that cover have to do with "Gateway to Paradise"?

According to the script, Earth had no water until Moon went to smash. Then how do you get Shane, Clayton, Atlantis(?) and Dr. Winston (I presume) all into one open boat? And since when was there a B.E.M. on an airless planet? Why the two-handed axe in Our Hero's hands? Why the screwy gat?

Or could it be that you are at last having covers without any stories? That's okay, but in that case why the line on the contents page, "Cover . . . illustrating 'Gateway to Paradise'?"

Well, maybe it has something to do with one of the other three stories. I fail to see which one.

The other confusing item is the name of the interior illustrator. Who is he, Ed? C'mon, tell us! He doesn't need to hide his light under a bushel (like **some** guys I know). While he's not, apparently, as skillful as Wesso, Finlay, etc., he does capture the spirit of the story. Especially the pics on pages fourteen and forty-five, which give a person the same impression as Williamson's descriptions for the story—and you know how the fans (well, quite a lot of them) enjoy Jack Williamson.

Tear off the cover and tell us who did the inside pics, and you've got a super issue. Jones' offering was especially good.

But I'll still lay a glass of water filled with radium chloride against a Xeno jug that somebody made a mistake about the cover.—156 S. University St., Blackfoot, Idaho.

So our poor artists catch the devil again, eh? Which brings us back in our swift circle of the planets to what I was telling you space rats at the beginning. Next issue we give *you* the devil—in Wellman's "The Devil's Planet."

Hey, hold on! Brake the ship and cut in the bow rockets! Before we berth for the conclusion of this trip we have a letter of special interest to Californian fans. Take it away, Futurians.

Dear Sarge: This is a bit of an announcement to let every fan in Northern California who reads STARTLING know about our club, the Golden Gate Futurians. It's really grand and has grown from two to twenty members in the short space of six months. In the next six months we hope to duplicate the feat (not twenty to two hundred though) by getting double the membership roll.

Never has a club charged lower dues, nor had much more fun. In the line of a regular STF club, we feature discussions, debates, announcements, activities, auctions, talks, programs, etc., but also have other things to occupy times when there are no meetings scheduled. This includes every conceivable

type of party, picnics, outings, excursions, dances, and more interesting times.

There is a really fine club publication which is not just another bulletin, but a fine piece of art containing 50 pages between stiff covers! There's a rapidly growing library (incidentally containing almost every issue of this mag), and we have membership cards neatly printed, colorful stickers, original illustrations, and a mural is now being made for the meetings!

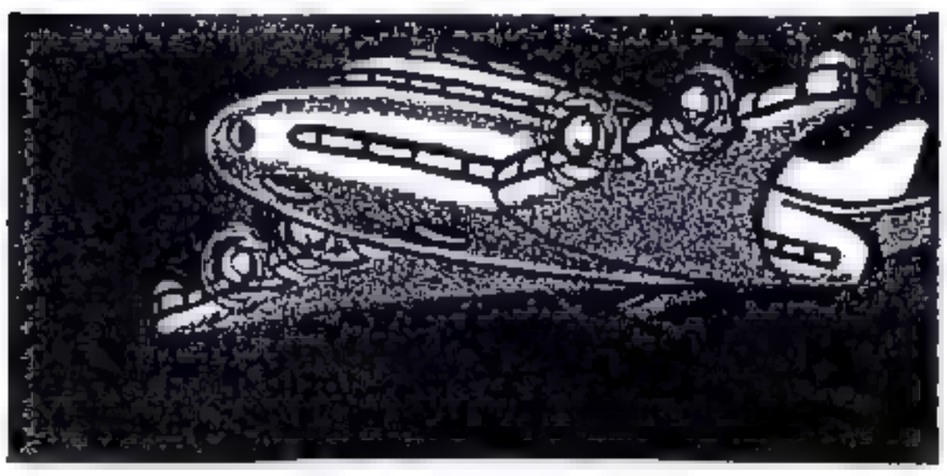
Every second and fourth Saturday we meet at 831 Central Avenue in Alameda at 7:30 **sharp.** Come on, guys and gals, meet fandom's top fans and **most beautiful fanette.** There are authors, artists and amateur editors.

Inquiries should be directed at, your cordial friend, Joe J. Fortier, Director G. G. Futurians.—1836 39th Avenue, Oakland, California, ANdover 2559.

Which brings us to the last drop of fuel in the regular tanks. And, tanks, I've had plenty. Load up with some Uranium 235 and a heavy-duty cyclotron for your blasts at the old sarge for next issue. (Phooey! Eight or ten pages, and not a decent argument or riot in the lot. Give me a shot of Xeno Rust Eradicator, and I'll go BEM hunting in the Venusian Black Swamps.)

—SERGEANT SATURN,
The Old Space-dog.

THUNDER JIM WADE



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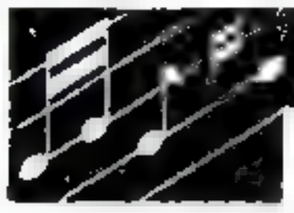

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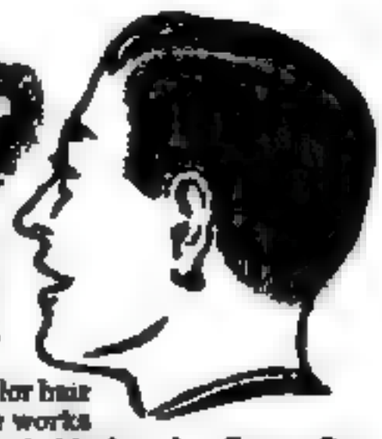

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REVIEW OF THE SCIENCE FICTION FAN PUBLICATIONS

SPACE WAYS. 303 Bryan Place, Hagerstown, Maryland. Edited by Harry Warner, Jr., James S. Avery and Walter E. Marconette.

Twentieth issue of this science-fictional journal not bad at all. Nothing in issue to take the place of the missing feature, "Stardust," our favorite fantasy column. Damon Knight's humorous piece, "The End of Pennywhistle" your best bet in this number.

ECLIPSE. 13598 Cheyenne, Detroit, Michigan. Edited by Richard J. Kuhn, Lynn Bridges and Rudy Sayn.

Bob Tucker's lead article on British, Australian and American fandom a worthy piece of reporting. Nice, intimate slant achieved by editors of this gazette, with everything covered, from the fan mags to the pro pubs. Mimeoing job superlative; neat artwork decorates mag throughout.

SNIDE. 650 Marion Street, Salem, Oregon. Edited by Damon Knight and Bill Evans.

The thud and blunder magazine. Editors state: "The reader is hereby warned that anything can happen in SNIDE, and the editors disclaim any responsibility for broken promises, publication schedules or traditions." Scintillating satire on scientifiction, with our companion mag, CAPTAIN FUTURE, coming in for a severe ribbing. Gordon A. Giles' "Via" series also burlesqued in this issue—but funny! Even the author shouldn't complain. Gay tempo from cover to cover, even if our face is a trifle ultra-violet.

SPECULA. 1426 W. 38th St., Los Angeles, Calif. Edited by Arthur Louis Joquel, II.

Super-78-page issue, with trimmed edges, excellent binding. Fiction, features and fact. Most attractive mag to reach this desk in last several months. Would suggest that emphasis on fiction content be lightened, and facilities of magazine used to explore genuine fan-appeal features, such as the Forrest J. Ackerman contrib, "F.P.1 Does Reply."

THE SOUTHERN STAR. 3600 Grand Street, Columbia, S. C. Edited by Joseph Gilbert, Art R. Schnert, Harry Jenkins, Fred Fischer, W. B. McQueen, Lee B. Eastman.

Poetry, news, departments—and no fiction! in this issue. Table of contents presents palatable fan fare. Good critical article on Edgar Rice Burroughs in this issue.

FANTASIA. 269 Sixteenth Avenue, San Francisco, Calif. Edited by Lou Goldstone, George Cowie, Borrie Hyman.

Mag still pans us—but we like them! Light reading; color illustrations attractive. T.W.S. author, Graph Waldeyer, in issue.

ULTRA. 274 Edgecliff Road, Woollahra, Sydney, NSW, Australia. Edited by E. F. Russell.

Big news here is forthcoming second anniversary issue, to run forty pages, with all Australian fans represented. Make-up and contents only fair this issue. Can stand improvement.

FANTASY NEWS. P. O. Box 84, Elmont, N. Y. Edited by Will Sykora.

Sykora and staff still garner scoops in the fantasy field for weekly release with Winchellian ardor. A live-wire fan journal.

NO HEROES WANTED

(Concluded from page 114)

lick me any day in the week. Any day you want, Red. Any day."

There was a sigh in the room, a sigh that came from a lot of men drawing breath at the same time. Red Riley looked around at that circle of men. They were all grinning. He looked at the Old Man. The boss was grinning. He looked at Hardigan. Hardigan was grinning. He didn't see a politely respectful face in the whole crowd.

"You called me 'Red'," he said uncertainly.

"Sure," said Black Jim Hardigan. "It's a little custom we have. We don't have any use for heroes around here and we don't give a man anything until he's proved himself. We don't call him by his first name until he's shown what he's got inside of him. That little piloting job you just done entitled me to call you by your first name. It also entitled me to take a poke at you. And anytime you want to poke back, Red, you've won the privilege."

Red Riley began to grin. "If you put it that way," he said. "I'm not so anxious. All I ever wanted from you buzzards anyhow was to have you call me 'Red.'"

Answer to Scientific Crossword Puzzle on Page 122

T	O	N		G	L	E	B	A		L	E	G
E	R	A		R	A	M	U	S		I	R	A
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D	E	M	O	N		S	C	O	T	O	M	A
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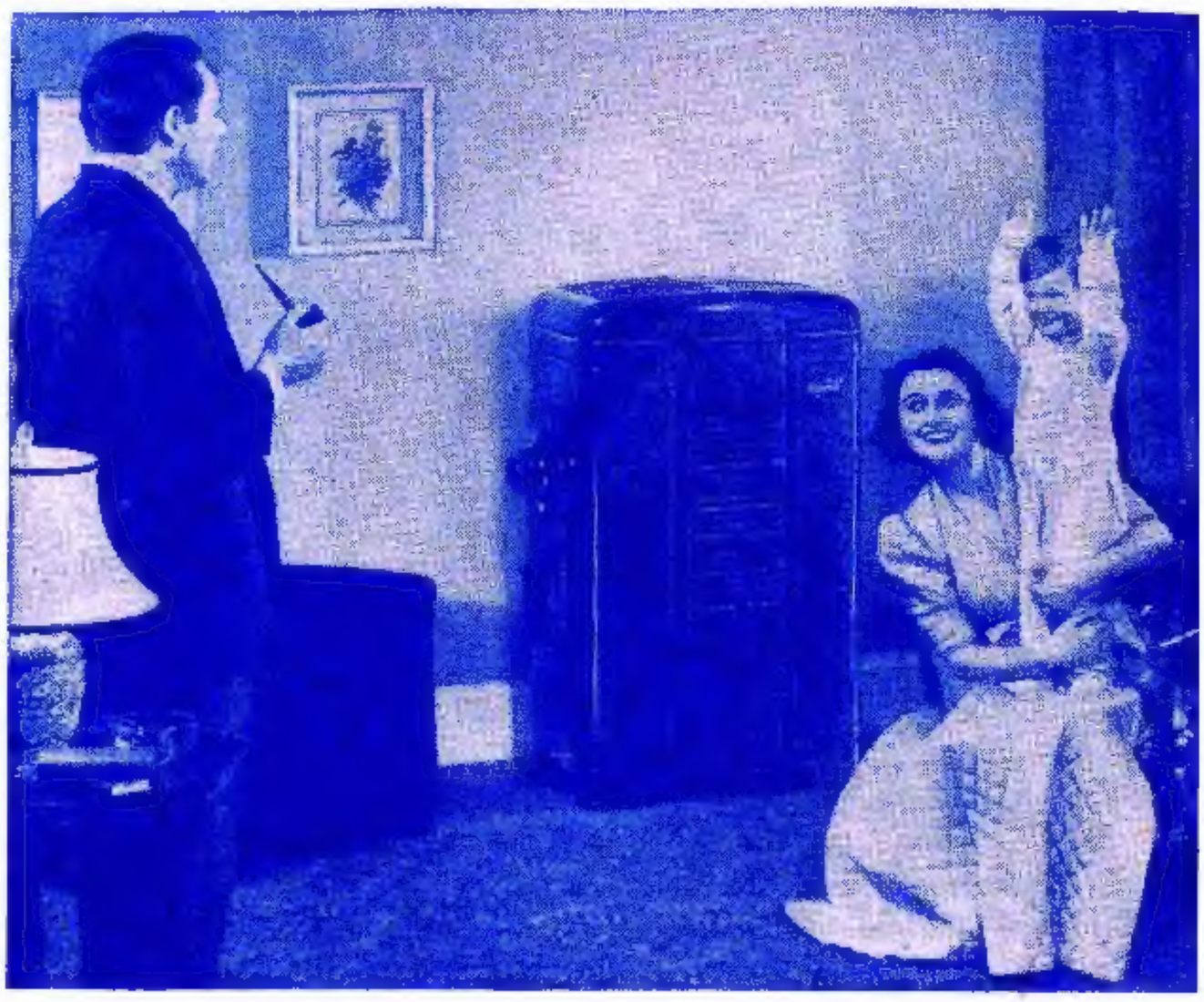

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